

10.502/B

0/0

~~157~~

~~107~~

1729-1706

m. c.

4

107-



A
V O Y A G E
T O
S E N E G A L,
T H E
I S L E O F G O R E E,
A N D T H E
R I V E R G A M B I A.

By M. A D A N S O N,
Correspondent of the Royal Academy of
Sciences.

*Mediis in finibus orbis,
Sol ubi.*

Translated from the FRENCH.

*With Notes by an English Gentleman, who resided
some Time in that Country.*

L O N D O N:


Printed for J. NOURSE in the Strand, and
W. JONHSTON in Ludgate-street. 1759.



Digitized by the Internet Archive
in 2018 with funding from
Wellcome Library



THE
TRANSLATOR'S
PREFACE.

 T is a maxim established by a celebrated philosopher of antiquity, *that if a young man is ambitious to raise a reputation in the world, or to improve in knowledge and wisdom,*

he should travel into foreign countries *. This seems to have been strongly verified by the learned M. Adanson, author of the following voyage. The love of natural history, and an ardent desire of fame, excited this gentleman very early in life, to exchange his native soil for the burning sands of Senegal; where he spent five years, in making a diligent inquiry into the various curiosities, natural and artificial, of Negroland. Hitherto we had received but very imperfect accounts from that part of Africa, former adventurers having had

* Philostratus in Apollonio.

P R E F A C E.

v

no notion of improving their minds, but their fortunes; so that their relations are confined to the *auri sacra fames*, the purchase of slaves, teeth and dust, with other materials of gain. Our author is the first philosopher, who adventured to visit the torrid zone, for the propagation of knowledge; and who in search of this valuable treasure, may be truly said, to have encountered more monsters, than those ancient heroes, represented in fabulous story, to have gone in pursuit of the golden fleece.

He begins his observations at his departure from Port L'Ori-

A 3

ent,

ent, the third of March, 1749, and does not finish them till five years after, in the month of March, 1754. By the general account of his voyage, we find, that during this time he employed himself chiefly, in the most curious researches of natural history; consulting rather his zeal for the advancement of learning, than his bodily strength, which was often put to the severest trials. We shudder even at the perusal of the many hardships he went through, to satisfy his own and the public curiosity; either in walking over the burning sands of the deserts of Africa, exposed to the scorching heats
of

of the sun ; or in traversing rivers and torrents, upon the back of a Negroe, who was frequently up to his chin in water ; or in defending himself against tigers, wild boars, crocodiles, serpents, and other savage beasts, besides the many noxious insects, with which those deserts abound.

A Philosopher, like M. Adanson, whose aim in travelling is to see and to learn, takes notice of every thing that falls in his way. From so exact and judicious a narrative, one may therefore form a just idea of this part of Africa ; a country overspread with misery, the natural consequence of laziness. Thus he informs us of
what-

whatever relates to the manners and customs of the Negroes, to their dress, habitations, repasts, dances, superstitions, and poverty : neither does he forget to mention their sociability, good-nature, docility, and respect for the French nation, which, we make no doubt, but they will be equally ready to shew to the new conquerors of Senegal *. He likewise takes notice of the Moors of that country, a nation very different from the Negroes, but almost as poor and as indolent. Our author lived and conversed with those different people, and

* This is to be understood, provided they meet with the like good usage they have been so long accustomed to.

met with so kind a reception from them, as must be an encouragement to those, who shall have occasion to trade to that coast, since the French settlements have been so gloriously reduced by the arms of Great-Britain.

In regard to the authenticity of this narrative, we may venture to affirm, that nothing of the kind has been published, with such strong marks of veracity, since Lord Anson's voyage. The character of our author, and his learned improvements, are well known at Paris, where he went through a course of study, under Messieurs de Jussieu, of the Royal Academy of Sciences. Up-
on

on expressing an earnest desire of going over to Africa, with a view of making discoveries in the natural history of that country, he was introduced to M. David, Director of the East-India company, who recommended him in the warmest manner to M. de la Brue *, director general of the factory of Senegal. These are
public

* This gentleman being mentioned with great respect by our author, in several parts of this voyage, the reader will not perhaps be displeased with a further account of his character. He lived 27 years on his government, during which time his constant study was to serve not only his country, but the whole human species. I shall give but one instance of his universal benevolence. Having learned that the Moors, in the neighbourhood, either made captives, or killed, such Europeans, as had the misfortune to be ship-wrecked on their coast; he, from a principle of humanity, offered a reward of the value of twenty moidores for every man in that condition,
they

public facts, which evidently prove him to be a man of character and abilities, and every way qualified for this arduous task, so greatly conducive to the advancement of learning and commerce. As to his manner of executing it, we need only to mention the high approbation of the Royal Academy of Sciences, which we shall insert here at full length, as a lasting monument of the author's extraordinary merit.

they should bring to him alive. Thus he redeemed, at different times, and sent home to their native country, at his own expence, fourteen British subjects. He is also a man of genius and learning. The author of this note came to France with him, in the first cartel.

Extract

*****!*****!

*Extract from the registers of the
Royal Academy of Sciences,
Dec. the 4th, 1756.*

MEssieurs de Reaumur and de Jussieu Junior, having been appointed to examine a work, written by M. Adanson, correspondent of the Academy, and intitled, *A Voyage to Senegal, &c. performed during the Years 1749, 1750, 1751, 1752, 1753, &c.* and having made their report, the Academy is of opinion, that the ingenious notions, exact descriptions, and judicious observations of the author, afford reason to believe, that his
work

work will be acceptable to the public, and deserves the approbation of the Academy. In witness hereof I have signed the present certificate. Paris, Dec. the 4th, 1756.

Grand Jean de Fouchy, perpetual secretary of the Royal Academy of Sciences.





ADVERTISEMENT.

THE Reader will please to observe, that the French names of several places, animals, trees, &c. have been retained in the translation, as well because some of them seem to be of African original, others have been received in late use by the natives, and others, in fine, (which we may say of most of them) were such as we could not find proper terms to express them in our language. In regard to the Notes interspersed throughout this work, they were communicated by an English Gentleman, of high character and reputation, who resided some time in that country, and whose name would do us honour, were we at liberty to mention it.





A
VOYAGE
TO
SENEGAL, &c.



It has been long observed, that most people come into the world with an inclination to some particular study or profession, which grows up and is strengthened with years. Whatever views our parents may have had in our education, the predominant taste always prevails, and, generally speaking, determines the pursuits or occupations of the rest of our life. Having in my very early days felt a particular liking to the study of philosophy and natural history, I found my

B

in-

inclinations averſe from the profeſſion for which my parents deſigned me, which was that of the church; and therefore I reſigned a benefice, with which I had been already provided, that I might be intirely at liberty to purſue the ſtudy of natural philoſophy.

The branch I firſt took up with was that of botany, which I conſidered as one of the moſt engaging ſtudies, not only from its conſiderable uſe in life, but from its agreeable variety. The opportunity I had of attending the lectures of Meſſ. de Juſſieu at the king's gardens, led me thither very often; and the ſtrong paſſion I felt for that ſcience, together with my conſtant application, ſoon made me known to thoſe gentlemen. I cannot ſufficiently expreſs my acknowledgment to thoſe two great maſters, under whoſe direction I firſt began that vaſt career, which I have not yet finiſhed. The ſpirit of obſervation and inquiry, ſo remarkable in M. Bernard

nard de Jussieu, and which he transfuses, as it were, into those, who sympathise with him in the same kind of studies, took with me immediately, and by degrees led me on from the study of plants to that of minerals, and from thence to that of animals, insects, and shells, in short, to every branch of natural history.

From that time I had access to the king's cabinet, and to those of M. de Reaumur, and Mess. de Jussieu; there I laid a foundation of knowledge, to qualify me for making observations of every kind: and as a little astronomy seemed conducive to my purpose, I learnt as much as was necessary under M. le Monnier.

After I had gone through a course of study for upwards of six years, under the direction of those celebrated Academicians, I made known the intention, which I had long since formed, of going abroad for further improvement. The obser-

vations of those gentlemen on different branches of the natural history of France had very near exhausted the subject; I therefore concluded that nothing could be of greater service to me, than to employ a part of my youthful days in a voyage to some distant and unfrequented country, from a persuasion that I should return with several discoveries, which would be new to Europe. I was sensible that the equinoctial parts of Africa had not been visited by any naturalist, consequently that a vast field was open to me, where I might reap a plentiful harvest of observations.

It was not, I confess, a small undertaking, for me alone to execute a work, which requires the joint labours of persons well skilled in botany, natural philosophy, anatomy, and design. This consideration however did not deter me; and I declared my intention to my late father, who introduced me the beginning of the year 1748, to M. David,
knight

knight of the order of St. Michael, and director of the East-India company, to whom he was very well known. M. David, attentive to whatever may be of use to commerce, greatly approved of my design, and expressed vast joy at an undertaking, which might be as serviceable to natural philosophy as to the commerce of the honourable East-India company. He got me a place in the factory of Senegal, and promised me my passage on board the first ship which should set out immediately after the publication of the peace. I was greatly charmed to find my wishes fulfilled, and I set out from Paris the 20th of December the same year, in order to take my passage at Port l'Orient in one of the company's ships.

20 Decem.
The au-
thor sets
out from
Paris.

The winter was still very severe when I embarked the 3d of March 1749, on board the *Chevalier Marin*, commanded by M. Daprès de Mannevillette. We set sail about ten o'clock in the morning, and got out of harbour in company with

1749.
March 3.
The au-
thor takes
shipping at
Port L'O-
rient.

1749. two small vessels, which were designed for
 March. the same port with us. The wind being
 at N. E. soon carried us out to sea; the
 beauty and serenity of which afforded us
 a most delightful prospect. An infinite
 number of porpoises, or sea-hogs, dan-
 cing about our ship, seemed to wish us a
 happy voyage; they flounced and leaped
 above the surface of the water, so that their
 intire bodies could be seen; then bend-
 ing themselves like a bow, they plunged
 into the liquid element, and rose again
 with surprizing agility, so as to imitate
 by these different motions the undula-
 tions of the waves. It was pleasant to
 behold them, now advancing in front,
 and drawn up in the same line; now
 coming athwart each other, as if they
 intended to dispute who should ap-
 proach nearest the vessel; in short, their
 sports were so various and entertaining,
 that we gazed at them a long while, be-
 fore we were tired.

Porpoises
or sea hogs.

They move
against the
wind. These fishes are said to move con-
 stantly against the wind; and the sailors
 can

can foretell by their motion, which way it is to blow. Though this may not 1749.
March.

be true on all occasions, it was so at least on this; for we did not long enjoy that agreeable serenity. The wind soon chopped about, and blew so hard from the S. E. that the sea grew very rough in a short time. The small vessels that accompanied us, were dispersed, and we lost sight of them till the day we arrived at Senegal. In the mean while the storm increased, and the billows rose so high, that we were obliged to drive before the wind, and in that condition we experienced the utmost fury of a tempestuous ocean. At length, after having struggled twenty days with this boisterous element, luckily we doubled Cape Finisterre, which had given us so much trouble.

Bad weather near Cape Finisterre.

No sooner had we reached the latitude of 36, when we began to find the sea more calm. A fresh gale sprung up at N. N. E. so that we had very agreeable

April.

1749. weather after the storm, and were en-
 April. joying the pleasure of a fine climate,
 6th of Apr. when we espied land the 6th of April.
 Sight of
 the Peak of
 Tenerif. This was the Peak of Tenerif, which
 appeared to us in the form of a pyramid,
 or more properly of a sugar-loaf, the
 sides of which were stuck with several
 points. Though according to our rec-
 koning, we were distant from thence
 upwards of fourteen leagues at N. E. it
 seemed to us to be raised under an angle
 of above five degrees. At this distance, it
 had more the appearance of a cloud than
 of a mountain, by reason of its white-
 ness; and nothing but its stability could
 make us distinguish it. Sometimes it
 was perceived above, and at other times
 below the clouds, according as these
 were more or less distant from us. The
 nearer we drew towards it, keeping it
 always to the south-east, the more it
 seemed to be upon a level with the
 neighbouring mountains; so that when
 we were within four leagues, it was no
 longer possible for us to distinguish it
 from

from the rest. In this position the island of Tenerif seemed to be a cluster of mountains, joined so close to each other, that we could only discern their tops.

1749.
April.

The notice we had taken of the isle of Tenerif, pursuant to the established custom of vessels trading to the coast of Africa, was sufficient to direct us in the remainder of our course to Senegal; and we should have followed it, had our present circumstances permitted. But the greatest part of our water and provisions had been consumed, during the delay occasioned by contrary winds off Cape Finisterre; and what little remained, was insufficient to complete our voyage: so that we were under an absolute necessity of putting into some harbour, in order to take in a fresh supply of provisions. Being so near land, it would have been imprudent to let slip the opportunity: we therefore

They de-
termine to
put into
Tenerif.

1749. therefore kept sailing till night, and then
April. lay by.

His ship
 casts an-
 chor in the
 port of
 SantaCruz.

The day following we made the harbour of Santa Cruz, in the eastern part of the island, where we anchored in forty-five fathom water, the length of three cables from land. This place greatly resembles a road for shipping, because it is very open; yet it would be a pretty good harbour, if it had but safe anchorage: but being a rocky bottom, it is apt to let the anchors slip, and to cut the cables. However it is a very wholesome place. The whole day was spent in mooring the ship, and securing its anchors. We likewise amused ourselves with fishing for mackrel. This seemed to be almost the only fish that could be found in that spot; and there was such plenty thereof, that all the mackrel of the neighbouring seas seemed to have made this their rendezvous. We had only to throw out our line, and we were sure of catching fish; and frequently without bait.

The

1749.
April.

The people of the country catch this fish in a better manner. As soon as the night sets in, and the sea is calm, they light up flambeaus, and spread themselves with their boats all over the harbour, for about a league in circumference. When they come to the spot where there seems to be the greatest plenty of fish, they stop their boats, holding the flambeau above the water, in such a manner as it shall give light without dazzling their eyes: and as soon as they see the fish sporting on the surface of the waves, and gathering round the light, they cast their net, and drag it immediately into their boat: thus they continue till their quantity is compleated.

While this amusement lasted, we were visited every minute by fishermen, who came on board our ship to sell their commodity; and indeed we had it very cheap. The Canary mackrel is not of
the

1749,
April. the same sort as that of Europe; it is not so broad, but much smaller, though very long; the skin is of a deep blue on the back, of a silver colour on the belly, and agreeably streaked. The flesh is white and firm, but somewhat dry; and though inferior to our European mackrel, still it is very well tasted.

Difficult
landing.

The day following we had leave to go ashore. The sea was very calm in the road; but it was quite another thing on the sea-side; where there was a surf that would have frightened the most intrepid. As it is all covered with pebbles, which form a very steep bank, and are alternately impelled and repelled by the sea, it is very difficult landing. They are obliged to make use of the surge which drives towards shore, and to take care that the boat is not turned about, nor carried back to sea. For which purpose there are several sailors waiting on the sea-side; who, as soon

soon as they see the surge approaching, step into the water, lay fast hold on the boat, then lift it up with the people in it, and carry it ashore in a most dexterous manner.

1749.
April.

After we had landed we found at the distance of a hundred paces from the sea-side, the town of Santa Cruz, situate in the east part of the island, as well as the harbour to which it gives its name. This town is neither fortified, nor surrounded with walls. It stands on a plain ascending from the sea, and terminating in a narrow piece of land, very flat, white, and sandy, about a league in extent towards the south. The town is four hundred fathoms in length, and fifty in breadth. It contains three hundred houses, built of Stone, and three stories high. The number of inhabitants is about three thousand, all Spaniards, who in their customs and manner of living differ but very little from those of Europe.

Town of
Santa
Cruz.

Within

1749.

April.

Laguna
the capital.Peak of
Tenerif.

Within three leagues west of this city, following the gorges of the mountains, which form an insensible ascent, we found the town of Laguna, capital of the island. It is situated at the foot of the Peak above-mentioned. This mountain, which bears the name of the Peak of Tenerif, is in 28 degrees 12 minutes north latitude, and eighteen degrees 52 minutes west longitude of Paris. We found its heighth to be above two thousand fathoms, that is, near a league perpendicular, which makes it one of the highest mountains in the universe. It is said that the top of it is covered with snow the whole year round, and that it sometimes throws out combustible matter, without much noise. It stands nearly in the middle of the island, and is surrounded with a great number of mountains, which are almost half a league in perpendicular heighth. At the foot of these mountains you see several gutters like frightful precipices, which are oftentimes above

a hundred feet wide, and two hundred deep. They are made by the water-floods precipitated thither during the storms; and as soon as those floods are gone, the bottom is left quite bare.

1749.

April.

The soil of this island is of a reddish cast, not at all deep, but extremely fruitful. In the gorges of the mountains to the north and east parts of the town, you see the finest groves of orange, citron, and lemon-trees of all sorts. There are also pomegranate and fig-trees all over the island. Besides the choicest fruits in Europe, the inhabitants of Tenerif have those of Africa, as banana's, papaya's, and anana's, or pine-apples, which they plant in their gardens. The most ungrateful lands produce carob-trees, and melons of every kind, especially water-melons. In the vallies you see fields of the finest corn in the world, variegated at regular distances with rows of dragon-trees *, which in their heighth and figure

Nature of
the soil.* Draco arbor. *Clusii*.

greatly

1749. greatly resemble the majestic tallness of
April. the palmetto-tree †.

Its vine-
yards.

The mountains are laid out in vineyards, which have acquired a high reputation by their excellent wines, known by the name of Canary and Malmsey. The former is extracted from a large grape, which makes a strong heady liquor; and is the common wine. The latter is made of a small grape, the berry of which is round and vastly sweet; and the juice squeezed from it has likewise a sweeter and more agreeable flavour, which gives it greatly the advantage of the other. The quality of these wines is commonly attributed to the climate, and to the nature of the soil; but I apprehend that the culture and form of the vineyards contributes at least as much to their goodness. Their method, as I have seen practised in the

† A kind of palm-tree, the leaves of which open like a fan.

neigh-

neighbourhood of Santa Cruz, is as follows. They pitch upon a hill that has 1749.
April.

an advantageous exposition to the south, preferable to any other : the lower part they plant with vines, to an ascent of two hundred feet at the most. Upon the whole ground designed for the vines, they erect little walls breast high, at the distance of four or five feet from one another. These serve for several purposes ; in the first place, by upholding the earth, they hinder the roots of the tree from being laid bare ; secondly, they withhold the rain-waters, which would otherwise run down the hills, without soaking the earth ; lastly, they increase the reflexion of the sun beams, and procure a greater heat to the vine. True it is, that as these walls are made of dry stone, symmetrically ranged without mortar or mud, part of them tumble down sometimes in heavy rains : but the mischief is quickly repaired, and may even be prevented, by laying above the uppermost wall a row of large stones

1749.
April.

somewhat inclined, to break the force of the waters, and divert their stream. This practice, I think, might be followed also in Italy, and even in Provence and Languedoc, as well as in other parts of the south of France, by private people possessed of mountainous lands, which they know not what to do with. By this method they might cultivate a great many hills, which have been neglected for their steepness, and would turn to account, especially if they are well situated.

The back of these mountains, on the north side, is barren and uncultivated. The prospect it affords to the eye, is an amphitheatre of bare rocks, the colour of slate, cut into vertical parallelopipedons, from six to eight feet high, and from three to four broad, the angles very acute. They may be considered as so many precipices raised one above the other. When you have reached

have reached the top, you are suddenly ravished with a prospect bounded only by the horizon of the sea: you find yourself raised far above the clouds, through which you may descry, at the distance of twelve leagues to the south, Canary and the other neighbouring islands. Here, instead of treading upon earth, I was amazed to find nothing under my feet but ashes, pumices, and burnt stones, fragments of which I saw likewise scattered here and there as I descended; but the greatest part of them are fallen down to the foot of the mountains, and even to the sea-side.

1749.
April.

Prospect
from the
top of the
moun-
tains.

Where the earth was open, I perceived under the pumices a stone in large masses, of the colour of slate, and a good deal like the bare rocks which I had observed on the ridge of the mountains. This stone bears so great resemblance to that which is melted by volcano's; and the comparison I made be-

Nature of
the stones.

1749.

April.

tween it and the lavas, which M. de Jussieu had received not only from the volcano's in Italy, but likewise from that of the isle of Bourbon, confirmed this resemblance in such a manner, that I think we cannot, nor ought we to give it any other name. The like remark I made in the gutters, and in the quarry that has been dug in the neighbourhood of Santa Cruz: there we find the same masses underneath a very irregular stratum of burnt stones; and they are cut into pieces for the use of building. The external and internal appearance of these mountains, the lavas of which they are intirely formed, and the several burnt stones which lie scattered as far as the sea shore, leave no room to doubt but that each of the mountains, of which the isle of Tenerif is composed, owes its original to a particular volcano, which, after undermining it inwardly, at length has intirely spent itself: and this subterraneous operation is still continued

nued under the Peak, that huge mountain, which vomits fire from time to time.

1749.
April.

There is never a river in this island, ^{Springs} because of the smallness of its circumference. The inhabitants supply the want thereof by wooden pipes which communicate with the springs in the mountains: and from thence the water is conveyed to the town, the distance of about half a league. This water being hard and crude, they filtrate it through a stone, which is very common in their quarries. It is a kind of lava, of the colour of foot, in a medium betwixt the density of the grey lava, and the porosity of the pumice.

The temperate climate of Tenerif, and the richness of its pasture, contribute greatly to the goodness of the cattle. They have fine herds of oxen, and excellent kid; but mutton is not so common.

1749. mon. They breed all sorts of poultry:
 April. but game, especially wild fowl, is very
 Canary- birds quite rare. I took notice that the Canary-
 grey. bird, which grows white in France,
 is here almost as grey as a linnet.
 This change of colour very likely
 is owing to the coldness of our cli-
 mate.

Plants in
 Tenerif.

The passion I had for herborizing,
 made me regret the backwardness of
 the season. Most of the plants peculiar
 to this country, were still concealed in
 the bosom of the earth; nevertheless
 my researches were not altogether fruit-
 less. Near the sea-shore I found two
 sorts of fig-marygolds, otherwise called
ficoidea *: the *jasminoides*, or bastard
 jas-

* *Ficoidea procumbens*, portulacæ folio. *Niss.*
Mem. Acad. 1711. pag. 322. pl. 13. fig. 1.

Aizoon foliis cuneiformi-ovatis, floribus sessilibus.
Linn. hort. Ups. pag. 127.

Ficoidea nostras, kali folio flore albo. *Tournef.*
Mem. Acad. 1705. pag. 241.

Mesem-

jasmine *, adorned the tops of precipices and gutters with its pendant branches, which were loaded with ripe fruit : and the corn-flag of † Provence enamelled the valleys and meadows with its flowers. As I traversed the mountains, I perceived that the plants peculiar to them, seemed to affect a certain height. For instance, the *kleinia* ‡, and some new plants, which I purpose to make known, always grow on the lower part, where the vineyards are generally planted. About the middle we saw only the *tithymalus* ||, or spurge; and the top of all was covered with forests of *euphorbia* ¶,

1749.
April.

C 4

whose

Mesembryanthemum foliis alternis, teretiusculis, obtusis, ciliatis. Linn. hort. Upsal. pag. 129.

* *Jasminoides Africanum, jasmini aculeati foliis, & facie. Niss. Mem. Acad. 1711, pag. 322. pl. 12. fig. 1.*

† *Gladiolus utrinque floridus, flore rubro. C. B. pag. 41.*

‡ *Kleinia foliis lanceolatis, planis, caule lævi, ventricoso. Linn. hort. Cliff. pag. 395.*

|| *Tithymalus dendroides linariæ foliis ex insula Canarina. Pluk. Phyt. tab. 319. fig. 1.*

¶ *Euphorbia aculeata, nuda, subquingularis, aculeis geminatis. Linn. hort. Cliff. pag. 196.*

1749.
April.

whose stalks, though from twelve to fifteen feet high, appeared to me below, like fine moss. The *euphorbia* and the *tithymalus* were then in flower, and surrounded with several sorts of bind-weed, which twisted round their stems. In my walks I met with no more than one sort of land-shell, for the description and figure of which I refer to the history of shells, at the end of this relation *.

Beauty of
the cli-
mate.

I was every day more in love with this beautiful country. The mildness of a climate where it never freezes, the advantageous situation of the island, and the variety of its productions, all together gave me infinite pleasure; so that I should have staid much longer if circumstances would have permitted. But as the season was advancing, and we had taken in our supply of water and provisions; we were obliged to think of resuming our voyage.

* Conchæ univalves. 5th sort, pl. 1. fig 2.
Pouchet.

The fifteenth of April we weighed anchor, and left the isle of Tenerif after eight days refreshment. The trade winds at N. E. were so gentle as not to ruffle the sea, so that we steered a pleasant course till we reached the tropics. There we soon found by the bright serene days, and excessive heats, that we had changed climate the third time: for in less than six weeks we experienced winter, spring, summer, and the dog-days. In these latitudes the sea, when agitated in the night, seemed as if it were on fire, and marked our course by a streak of light which the vessel left behind it. This phænomenon, the particulars of which shall be explained in another work, appeared to me very engaging, and I spent several nights in inquiring into the cause of it.

1749.
April.

^{15.}
Departure
from Te-
nerif.

Luminous
sea.

We continued our course with the same favourable weather till the 25th of April, when we found ourselves within sight of the coast of Senegal. The land

^{25.}
He disco-
vers the
coast of
Senegal.

is

1749. is low, sandy, and very white, so that
April. with great difficulty could we discern it, though it was very clear weather, and we were within three or four leagues of shore: at length we spied a thicket partly covered by the downs, whereby we knew that we were off the wood of Griel, that is, within two leagues north of the island of Senegal. Not long after we saw hovering over the ship, a bird which seemed greatly tired, and desirous of rest: he pitched upon one of the masts; but a fowling-piece soon brought him down upon deck.

A Bird of
 passage.

This was too beautiful a bird to omit giving a short description of him. He greatly resembled a jay* in the size of his body, and the figure of his beak and feet; but he differed from him in some other respects. His belly was of a pale blue, and his back fallow. His tail was adorned with two feathers, as long as the rest of his body; and the colour

* *Garrulus argentoratenfis.* *Willug. Ornith.*
pag. 89. tab. 20.

both

both of the tail, and of his wings, was the finest sky-blue that eyes could behold. I often had occasion to see this kind of jay in the country of Senegal: but as I afterwards found he is a bird of passage, that comes to reside for some months of the summer in the southern parts of Europe, and goes back to spend the remainder of the year in Senegal, I would not omit mentioning that he is sometimes met in his passage at sea.

1749.

April.

The same day we arrived before the factory of Senegal. After having made the usual signals, and saluted the fort with our guns, we cast anchor three leagues higher, at the mouth of the river Niger, in nine fathoms water, a slimy bottom, and good holding ground. Though we were within half a league of the bar, the sea was very high; and the winds blowing off the shore, made a prodigious surf, which occasioned our ship to roll in a strange manner.

Here

Anchoring-place
in the
road.

1749. Here we were witnesses to a fatal accident, which but too often happens at
 April.

Boat over-
 set.

sea. We put out our boat; but unluckily it overset, and one of the men was drowned *. However we did not stay long in the road; a boat was sent from the isle of Senegal, to carry us over the bar, and pilot us into the river.

What is
 meant by
 a bar.

By a bar we understand a particular agitation of the waves, which in passing over a shoal †, swell and rise to a sheet of water, from ten to twelve feet high, and afterwards break in the fall. No sooner has the first wave had its effect, but it is followed by a second, and this by a third. They begin

* This we may believe, as we lost on that bar, last May, a boat belonging to the Harwich man of war, and in it captain Foreman, the next in command to the commander in chief, and than whom, none could have more deservedly been regretted.

† Which shoal, or bank of sand, our author should have understood by a bar; but what he says above, is only the effect of the shoal or bar. I only mean, the shoal is the bar.

to be perceptible at a hundred and sometimes a hundred and fifty fathoms from the coast, and are as formidable to large as to small vessels. A boat runs the danger of being overfet, and a ship of being dashed to pieces. This bar extends all along the coast of Senegal; at least there are few places it does not reach. Such was the danger we had to encounter before we could enter this river, the mouth of which was covered by a bank of sand, against which the billows dashed with great violence. Luckily for us, we arrived at a time of year when the sea is not so boisterous, consequently when the bar is less difficult to get over: we were piloted by negroes, all hearty fellows, and so well acquainted with this navigation, that very rarely any accidents happen *.

1749.
April.

The pilot boats belonging to the bar are small decked vessels, from fifty

Pilot boats
of the bar.

* All accounts, as well as our short acquaintance of the bar, confirms the truth of this.

to

1749. to sixty tuns, and sometimes larger.
April. They generally sail with ballast only,
 and seldom draw more than four or
 five feet water. The care of them is
 intirely committed to negroes, whom
 you must not pretend either to contra-
 dict or advise. When we were on the bar,
 we were obliged to keep profound silence,
 that the pilot might not be in the least
 interrupted: some hid themselves through
 fear of being drowned, and some through
 apprehension of being wet: others, more
 intrepid than the rest, stood upon deck to
 view the agitation of the waves. I, as
 an observer, could not help placing my-
 self in this station; and for my pains
 I got thoroughly wet. We were above
 half a quarter of an hour in this dan-
 gerous passage; now lifted up by bil-
 lows which bended under us; and now
 tossed by others which dashed against
 the sides of the vessel, and covered it
 all over with water. One wave lifted
 us up very high, and then left us a-
 ground; another came and took us up
 and

Passage
 over the
 bar.

and was followed by others in the like ^{1749.}
 succession. At length, after being tossed ^{April.}
 in this manner for some time; we saw
 ourselves out of danger. As it is custo-
 mary on this occasion to make a hand-
 some present to the negroes of the bar;
 each passenger behaved generously to-
 wards them, and they were very well
 satisfied.

As soon as we entered the river Ni- <sup>Breadth of
the river
Niger at its
mouth.</sup>
 ger, we found ourselves in a very gen-
 tle stream, of above three hundred fa-
 thoms in breadth, that is, four or five
 times broader than the Seine at Pont-
 Royal. Its direction is exactly north
 and south, parallel to the coast, for the
 space of three leagues, from its mouth
 to the island of Senegal. The land on
 both sides is only one continued plain
 of quick sands, extremely white, with
 a few downs scattered here and there,
 and continually shifting according to
 the caprice of the winds. The western
 bank forms a very low cape or nar-
 row

1749. row slip of land, which separates the
 April. river from the sea; and whose greatest
 breadth is not a hundred and fifty fathoms: this is called Barbary Point. The eastern bank is higher; but they are both equally dry and barren, and produce only a few low plants. We did not perceive any trees, till we advanced two leagues higher, towards the English island; and then we spied some mangroves, which are almost the only tree we saw till we arrived at the island of Senegal.

The author lands
 at the island of
 Senegal.

This place is situated within three leagues of the mouth of the river, and two thirds of a league from the English island. It is the chief settlement of Senegal; and the residence of the director general. We arrived by nightfall at the harbour east of the fort, where we landed. As soon as I set foot on shore, I waited upon M. de la Brue, the director general, who gave me

me a most kind reception. I delivered to him the letters of recommendation which I had from his uncle, M. David, director of the East-India company, who was pleased to interest himself in my favour: and they operated even beyond what I could possibly expect in a country subject to such difficulties. In short, he promised to assist me on all occasions, and he did it accordingly with such readiness and good nature, as deserves a grateful acknowledgment from the lovers of natural history, if I have done any thing towards promoting this branch of learning.

1749.
April.

He soon was as good as his word: I had the liberty of travelling up the country, and of examining into its various productions. To facilitate my design, M. de la Brue procured me a boat, with negroes, and an interpreter, in short all conveniencies, as specified by the East-India company to the superior council, in a letter where.

D

in

1749. in they informed him of my inten-
April. tions.

Descrip-
tion of the
island of
Senegal.

Being arrived in a country so different in every respect from my own, and finding myself as it were in a new world, whatever I beheld drew my attention, because it afforded me matter of instruction. The air, the climate, the inhabitants, the animals, the lands, and vegetables, all were new to me: not one object that offered itself to my view, was I accustomed to. Which way soever I turned my eye, I saw nothing but sandy plains *, burnt by the most scorching heat of the sun. Even the very island I stood upon, is only a bank of sand, about 1150 fathoms in length, and 150 or 200 at the most in breadth, and almost level with the surface of the water. It divides the river into two branches, one of which to the eastward is about

Breadth of
the Niger
towards
this island.

* The author is mistaken, or has forgot, for the Guinea-side is all covered with woods: the island and the Barbary shore, or tongue of land, are exactly as he describes.

300 fathoms broad, and the other west-ward near 200, with a considerable depth. 1749.
April.

This island, notwithstanding its sterility, was inhabited by upwards of three thousand negroes, invited thither by the generosity of the whites, into whose service most of them had entered. Here they have erected houses or huts, which occupy above one half of the ground. These are a kind of dove or ice houses, the walls of which are reeds fastened close together, and supported by stakes driven into the ground. These stakes are from five to six feet high, and have a round covering of straw, of the same height, and terminating in a point. Thus each hut has only a ground floor, and is from ten to fifteen feet diameter. They have but one square door, very low, and many of them with a threshold raised a foot above the ground; so that in going in they must incline their bodies, and lift a leg up very high, an

Negroes of
Senegal.

Their
houses or
huts.

1749. attitude not only ridiculous but disagreeable. One or two beds are frequently sufficient for a whole family, including domestics, who lie pell mell along with their masters and the children. Their bed is a hurdle laid on cross pieces of wood, and supported by forkillas, or small forks, a foot above the ground; over this they throw a mat, which serves them for a *paille* or straw bed, for a mattress, and generally for sheets and bed-clothes; as to pillows they have none. Their furniture is not very cumbersome; for it consists only of a few earthen pots, called *canaris*, a few calabashes, or gourd-bottles, with wooden bowls, and the like utensils.

April.

Their beds

Their furniture.

What is meant by a *tapade*.

All the huts belonging to the same person are inclosed with a wall or palisade of reeds, about six feet high; to which they give the name of *tapade*. Though the negroes observe very little symmetry in the situation of their houses, yet the French of the island of

of Senegal, have taught them to fol- 1749.
low a certain uniformity in the large- April.

ness of the *tapades*, which they have regulated in such a manner, as to form a small town, with several streets drawn in a direct line. These streets indeed are not paved; and luckily there is no occasion for it; since they would be very much at a loss to find the smallest pebble upwards of thirty leagues all round. The inhabitants find a greater conveniency in their sandy soil: for as it is very deep, and soft, it serves them to sit upon; it is also their sofa, their couch, their bed. Besides it has some other good uses, namely, that there is no danger in falling; and it is always very clean, even after the heaviest rains, because it imbibes the water with great ease, and there needs only an hour of fine weather to dry it. However, this town or village, which ever you please to call it, is the handsomest, the largest, and the most regular in the country: they reckon, as I have already mentioned, upwards of three thou-

1749. sand inhabitants : it is about a quar-
April. ter of a league long, and the breadth
 equal to that of the island, whose cen-
 ter it occupies, being equally ranged on
 both sides of the fort by which it is
 commanded.

Descrip-
 tion of the
 men.

We may safely affirm, that the ne-
 groes of Senegal are the likeliest men
 in all Nigritia, or Negroland. They
 are generally above middle sized, well
 shaped, and well limbed. There is no
 such thing ever known among them as
 cripples, or hump-backs, or bandy legs,
 unless it be by accident. They are
 strong, robust, and of a proper tem-
 perament for bearing fatigue. Their hair
 is black, curled, downy, and extremely
 fine. Their eyes are large and well
 cut, with very little beard ; their fea-
 tures agreeable enough, and their skin
 the deepest black.

Their
 dress.

Their usual dress consists in a small
 piece of linen which passes between
 their thighs ; and the two ends being lift-
 ed up and folded, form a sort of drawers,
 which

which are tied with a fillet before; and 1749.
 thus they cover their nudity. They April.
 have likewise a *paan*, that is, a piece
 of callicoe, made in the form of a large
 napkin, which they carelessly throw over
 their shoulders, letting one end of it
 dangle against their knees.

The women are much about the Descrip-
tion of the
women. same size and make as the men. Their
 skin is surprisngly delicate and soft;
 their mouth and lips are small; and
 their features very regular. There are
 some of them perfect beauties *. They
 have a great share of vivacity, and a
 vast deal of freedom and ease, which
 renders them extremely agreeable. For Their
dress.
 their cloathing they make use of two
paans, one of which goes round their
 waste, hangs down to the knee, and
 supplies the place of an under-petticoat;
 the other covers both their shoulders,
 and sometimes the head. This is a

* The vast numbers of children, and children's
 children, the French begat by them, and left there,
 prove our author is not singular in his opinion.

1749. modest dress enough for so hot a coun-
 April. try : but they are generally satisfied
 with the *paan* which covers the reins ; and
 they throw off the other whenever they
 find it troublesome. One may easily
 judge that they are not long a dressing
 or undressing, and that their toilette is
 soon made.

Character
 of the Ne-
 groes of
 Oualo.

As the island of Senegal is within the
 dependance of the kingdom of Oualo,
 the Negroes who live there, especially
 those who are free, are of that nation.
 They are, generally speaking, very good-
 natured, sociable, and obliging. Those
 whom the company entertained in my
 service, were Oualofes, as they call
 themselves, or by corruption, Jallofs.

The au-
 thor learns
 their lan-
 guage.

Immediately after my arrival, I em-
 ployed some months, not only in study-
 ing the manners and character of the
 inhabitants, but likewise in learning
 the Oualofe language, which obtained
 most generally in that country : for I
 was sensible that it would be of great
 service

service to me, and even indispensably ^{1749.}
necessary in regard to the researches I April.
purposed to make. With this view I
frequented their company, and was a-
mong them as often as possible. At
length, when I looked upon myself as
sufficiently acquainted with their usages
and manners, and able to judge how
to conduct myself in a country which
had long been the object of my most
ardent wishes, I determined to set out
upon a ramble.

The quick sands of the island of Se- ^{Isle of Sor.}
negal, their dogs-grass, mangroves, and
bind-weed, could not long afford suf-
ficient employment for a naturalist.
There was no way to get further in-
struction, but by crossing the river in
order to visit the continent. With this
view I went over as often as I could in
my boat, and several days successively.
The island of Sor is the first land that
offers itself on the eastern bank of the
river, and is opposite to the isle of Se-
negal. It is above a league in length,
and

1749.
April.

and intersected by small rivers, which are called *marigots*. The soil is sandy like that of the island of Senegal, but of surprizing fertility. In the middle of the island there are several hills of a very gentle ascent, covered with white and red gum trees, * and others of the spinous kind, and of very difficult access.

10. May.
The au-
thor takes
a walk up-
on that
island.

I landed the first time on that island the 10th of May, attended by my interpreter, and the two Negroes, who had rowed my boat. It is bordered by a very thick wood, where with a good deal of difficulty I found a path, which is the only passage to the inner part of the island. This would be no great harm, if a person was not stopped every moment by thorns, which are apt to catch his clothes, and tear his legs: for my part I came off with losing a few

* A sort of *acacia* or Egyptian thorn, on which they gather two sorts of gum, the white and the red, heretofore known by the name of gum Arabic, and at present by that of gum Senega.

scraps

scraps of my waistcoat or shirt, the only apparel one can bear in so sultry a country, and where a shirt alone is very cumbersome. But my Negroes, with all their agility, oftentimes left some bits of skin behind them, not to mention the thorns which stuck in their feet, most of them going without sandals. Is it not amazing that the inhabitants of this island should have traded with those of Senegal more than thirty years, and all this while not have given themselves the trouble to open a convenient road! Can there be a stronger proof of the laziness and indolence of the Negroes? Their high road, the great thoroughfare of this island, is a path, which does not even merit that name; since a person is often obliged to creep on all four in order to get through it. Notwithstanding these difficulties I forced my way.

1749,
May.

My Negroes informed me, that there was some game in this place. I had
my

1749. my gun, and each of them had theirs.
 May.

Hares.

I coursed for some time without being discouraged by the curvatures I was obliged to make every moment under the thorns. I killed a few partridges and hares, which made me amends for my pains. The hares of this country are not altogether like those of France: they are not so large; and their colour is something between a hare and a rabbit. Their flesh is white, which gives them a greater resemblance to a rabbit; but they do not burrow: they are tender, and extremely well tasted.

Partridges.

The same cannot be said of their partridges; they are so tough, as to be good for nothing. I doubt much whether we ought not rather to call them wood-hens, for they are the same size, and much about the same colour. They are sufficiently distinguished from other birds of this kind, by two strong spurs to their feet.

Pleased

1749.

May.

Pleased with my sport, I proceeded as far as the village of Sor, which gives name to the island. Before I could get thither, I was obliged to cross two *marigots*: these are rivulets with which the whole country is intersected in such a manner, that one cannot advance above two or three paces, without being obstructed. I had contrived an expedient, when they were not too deep; which was, to make my Negroes carry me over. On this occasion I made use of it: one of them took me upon his shoulders, and as his clothes did not incommode him greatly, he was quickly up to his breast in water; so that he wafted me in an instant, as if he was running a race, over the first *marigot*, which was broader than the Seine at Pont-Royal. Thus was I mounted, if I may be permitted the term: and it is the safest method of crossing, because the Negroes are used to walk through these watry plains, as upon land,

Village of
Sor.Passage o-
ver two
marigots.

1749. land, and they know all the roads : and
 May. indeed, as I had no other conveyance
 in crossing a river or a lake of a
 middling depth ; I shall repeat it no
 more.

Excessive
 heat of the
 sands.

Notwithstanding the care I had taken,
 my shoes got wet, but were not long a
 drying. I had to walk on sands, which
 it would be incorrect to call by any
 other epithet than *burning*, since even in
 the most moderate weather, they expe-
 rience there a heat of 60 degrees and
 upwards, as I afterwards found by the
 observations which I scrupulously fol-
 lowed with M. de Reaumur's thermo-
 meter. A person may make an essay
 by getting such a heat in his feet, at a
 time when that of the ambient air is
 22 degrees in the shade, as it was
 then in the island of Senegal the 10th
 of May, one of the coldest winter-
 days in that country : it is easy then
 to judge of the extreme sensibility
 of an European, transplanted from a
 tem-

temperate climate, to the hottest part of the globe. My shoes grew tough like a horn, then cracked, and fell away to powder: even the feet of my negroes were chopped. The very reflection of the heat of the sun peeled the skin off my face, and gave me a smarting, which sometimes lasted five or six days. Such were the ordinary effects of the great heat I had to suffer, when I undertook this ramble over the district of Senegal: effects which increase in such a manner, that the heat of the place instead of 22 degrees, mounted to 34 in the shade, that is, in the coldest air. To these inconveniences I must add that of the quick sands, which are excessively fatiguing, because you sink up to your ankle; and your shoes being filled therewith, become intolerably heavy and troublesome. Then, for the first time, I perceived the use of that thick skin, thicker than the breadth of a finger, with

1749.

May.

Effect of
the heat.Inconve-
niency of
the sands.

1749. with which nature has strengthened
 May. the soles of the negroes feet, where-
 by they are secured against the hard-
 ness of external bodies, so as to have
 no occasion for shoes. Yet I accusto-
 med myself by degrees to this kind
 of fatigue: for there is nothing but
 what one may compass with a good
 will; and this was not wanting.

The au-
 thor's re-
 ception by
 the gover-
 nor of Sor.

After these vicissitudes of a passage
 through thorns, rivers, and burning
 sands, where I coursed and herborized
 all the way, I arrived at length at the
 village of Sor. There I found the go-
 vernor, whom the negroes distinguished
 by the name of *Borom-dek*, that is,
 master of the village. He was a
 venerable old man, about fifty, with
 a grey beard, and hoary locks.
 When I call him an old man, of
 fifty, this is because the negroes of
 Senegal are really old at the age of
 forty-five, and oftentimes sooner: and

I remember to have heard the French inhabitants of Senegal say several times, that according to the best of their observation, the negroes of that country seldom lived to be older than sixty; which agrees exactly with the remarks I endeavoured to ascertain during my stay at Senegal. But to return to the master of the village of Sor; he was a lusty, well looking man, whose physiognomy bespoke him a person of gentle manners and great good nature. His name was *Baba-Sec*: he was sitting on the sand, under the shade of a jujube †, planted before his hut, where he was smoaking and conversing with a few friends. As soon as he saw me, he rose up, presented his hand to me thrice, then laid it upon his forehead, and afterwards upon his breast, asking me each time, in his language, how I did. I performed the same

1749.
May.

Manner of
saluting
among the
negroes.

† Jujuba aculeata, nervosis foliis infra sericeis flavirs. *Burm. Thez. Zeyl.* p. 131. *Tab.* 61.

1749. ceremony myself at the same time,
 May. because I understood that such was
 the manner of saluting in this coun-
 try. He did not take off his cap, for he
 wore none: as to my part I followed
 the French custom, which is never to
 take off our hats to people of his
 complexion. He ordered a mat to be
 set before me, and I sat down: then
 he placed himself in one of the cor-
 ners; and notwithstanding all I could
 do, there was no prevailing on him
 to draw towards the middle. This
 is a mark of respect they shew the
 French, whom they look upon as
 great people; that is, as great lords,
 and far their superiors. Indeed they are
 not much in the wrong; and this kind
 of submission ought to be encouraged
 as much as possible*; so I did not press
 him hard. Two of his wives (for
 polygamy is established in that coun-

Their re-
 spect for
 the French.

* But that, among many other political arts of
 the French, can be only, at least, best effected un-
 der some well established government, such as that
 they had in Senegal and its dependencies.

try

try) came immediately after with their children, to pay their compliments to me, and they brought me a few bowls full of milk, with eggs and fowls. I drank some of the milk, and thanked them for the rest.

1749.
May.

Houfes or
huts at Sor.

It was near their dinner time, and *Baba-Sec* depended upon my staying. In the mean time, my curiosity led me to see the village. The huts were neither so large nor so neat as those I had seen in the isle of Senegal. In some, the covering came down almost to the ground, and was kept up before the door by a few stakes, to form a kind of pent-house, which sheltered them from the rays of the sun. In others, the walls were done over with thick mud, mixed with cow-dung, which stunk abominably. The latter had two opposite entrances, each of which was only an oval made in the wall, of a foot and a half diameter, and two feet from the ground. I had

1749. found the square doors of the island of
May. Senegal very uneasy; but these were
 still more so, since there was no such
 thing as entering them without doubling
 my chin to my knees. The inside was
 in every respect like what I had seen in
 Senegal. The streets were as irregular
 as the huts, and very narrow. Not-
 withstanding the little proportion ob-
 served by those architects, the villages
 still are very agreeable, because they are
 planted with trees, which besides the
 coolness of their shade, refresh the eye
 with a perpetual verdure.

Children
 quite na-
 ked.

The children of both sexes, even such
 as were nine or ten years old, an age at
 which the marks of puberty begin to
 shew themselves, were stark naked. The
 girls had for ornament round their waist
 a girdle of glass toys, or, where those
 could not be had, of a *requien's* * knuckle-

* A voracious fish, of the nature of a sea-dog.
 The young *requiens* are a dish very much liked by
 the Negroes.

bones,

bones, or of cockle-shells stringed like a pair of beads. Some perhaps will imagine that those children, in this state of nakedness, must be dashed at the sight of a stranger: but far from it; you may go up to them, and even play with them, they will give themselves no sawcy airs; and though they are neither shame-faced nor bashful, yet there is nothing in their countenance but what is natural and easy. No doubt but it will be also surprizing to many, that children, who were scarce six months old, should begin to walk by themselves. It was pleasant to see those little creatures tumbling on the sand before the sun, and creeping on all four like little monkeys, and to hear them utter inarticulately a few words between their teeth, with an air of contentment and pleasure. The women had all a *half-paan* round their waist, which served them for a petticoat; but from their waist upwards they were naked. Being generally well made, they have a very good air in this

1749.
May.

Beads.

1749. dishabille, especially when a person is
 May. used to their colour: those who are not
 accustomed to them, must be content
 with admiring their shape, which is ex-
 tremely fine.

Which way soever I turned my eyes
 on this pleasant spot, I beheld a perfect
 image of pure nature: an agreeable so-
 litude, bounded one very side by a charm-
 ing landskip; the rural situation of cot-
 tages in the midst of trees; the ease and
 indolence of the Negroes, reclined under
 the shade of their spreading foliage; the
 simplicity of their dress and manners;
 the whole revived in my mind, the
 idea of our first parents, and I seemed
 to contemplate the world in its pri-
 meval state.

He dines
 with the
 governor
 of Sor.

My mind was agreeably amused with
 these reveries, when word was brought
 me, from the governor of the village,
 that dinner waited for me. Upon
 which I turned back with my Ne-
 groes,

groes, who conducted me through that labyrinth of cottages, where otherwise 1749.
May.

I should have been easily lost. I found the governor just on the very spot where I left him, with his children, and a few friends. They sat cross-legged on the sand, round a large wooden bowl full of *couscous*; which is a thick-grained pap, made of two sorts of millet. He made me sit down by him; then he began to fall to, and thrusting his hand into the dish, he took a handful of *couscous*, which he rolled about with his fingers, for want of a fork and spoon, a conveniency they have not yet learnt. He invited me afterwards to do the same. I did not let him press me hard, but followed his example: for I never departed from this principle, that nothing contributes more to gain the confidence and friendship of strangers among whom you reside, than to conform to their customs and manner of living; and I always found my account

1749. in it. The *couscous* was judged excellent ;
May. and one of the most convincing proofs
thereof, was, that the dish was soon
emptied. For my part I did not judge so
favourably of it ; nothing that I can think
of is more insipid than this dish ; and
the manner of eating it is every whit as
disagreeable. However, I used myself to
it ; and found it afterwards very good.
This single course constituted our whole
feast.

When dinner was over, a young she-
slave, in her natural habit, presented us
all round a bowl full of water, out of
which each person drank ; and then
they made use of it to wash the hand
that had performed the office of a spoon,
which is always the right ; the left be-
ing designed for uses inconsistent with
cleanliness. These practices, like polyga-
my, are a consequence of the precepts of
the Mahometan religion, which they have
so

so far embraced, as its principles are agreeable to their own customs and easy manner of living. I was very much surprized, not to see any of my landlord's wives eating in company with him, but I was told, that such was the custom of the country, and that no woman ever had that honour done her; because they are persuaded, like good Mahometans, that there is no paradise for the female sex. Therefore they dined after us, and in the same manner; that is, without table, plates, table-cloth, spoons, knives, forks, or napkins.

1749.

May.

The women do not dine with their husbands.

In order to make my host amends for his good entertainment, I presented him with a few *pattes* * of iron, and I distributed some glass-toys among his wives and children. He wanted to keep

* The *patte* of iron is the twelfth part of a bar nine feet long; and serves for money in this country.

1749.
May.

me for a ball which was just going to begin; but I begged him to postpone it till another time, because it was near sun-set. We parted extremely well satisfied with each other. The *guiriots* *, in return for the generosity with which I had behaved towards them, attended me upwards of two hundred paces, beating on the drum, to the sound of which all the young people danced in cadence, expressing their joy. At length I lost sight of them, and made all the haste I could back to the island of Senegal.

I was not a little pleased with this my first reception at the lord of Sor's. It convinced me, that there ought to be considerable abatements made, in the accounts I had read and heard every where, of the savage character of the Africans; and I was of opinion, that this should

* This is the name the Negroes give to the musicians and drummers of the country.

not extend to the natives of Senegal. 1749.
 This gave me great encouragement, to May.

go oftener amongst them; and I was highly delighted to hear a little while after, that a vessel was to set out the month following, to buy some oxen at the Musketoe trading-place. An agent belonging to the company, who was entrusted with this commission, engaged me to perform the voyage with him.

Accordingly we embarked the 16th of June 16.

June, early in the morning, upon the river Niger. We ascended the stream, and when we came to the point of the isle of Bifeche, we began to lose sight of the island of Senegal, which is about a league distant from thence. To the right we had the isle of Bifeche, and the wood island to the left: they were both bordered with mangroves; so that our navigation was as pleasant as if we had been sailing through a large avenue of beautiful trees. The mangroves *

Voyage to
the Mus-
ketoe tra-
ding-
place.

* *Mangles aquatica*, foliis subrotundis & punctatis. *Plum. gen. pag. 13.*

1749. have something so extraordinary in their
 June. nature, that I cannot pass them over in

Man-
groves
very ex-
traordi-
nary trees.

silence. The largest of these trees are generally no more than fifty feet high; they grow only in the water, and on the banks of rivers where the tide goes up twice a-day. They preserve the verdure of their leaves throughout the year, which may be said also of most of the trees of this country: but what renders them more remarkable, is the long roots, which issuing out of their lowest branches, hang down to the water, and penetrate into the earth. Then they resemble so many arcades from five to ten feet high, which serve to support the body of the tree, and even to advance it daily into the bed of the river. These arcades are so close, and intertwined, one with another, that they form a kind of natural and transparent terrace, raised with such solidity over the water, that one might walk upon them, were it not
 that

that the branches are too much encumbered with leaves.

1749.

June.

Thus we advanced three leagues through mangroves, after which from the *marigot* of Kiala to that of Torkhod, within four leagues and a half of the island of Senegal, we saw nothing on both banks of the river, but rushes or weeds from ten to fifteen feet high *. Torkhod is a village situate on the left side of the river Niger, upon a hill of red sand, at the foot of which passeth the *marigot* that bears its name. This is the only village we could see the whole way from the island of Senegal. The mangroves had intercepted the prospect of the others, which are scattered about the low lands overflown by the Niger. The advantageous situation of Torkhod, the red colour of the hill,

Prospect of
the village
of Tork-
hod.

* Gramen dactylon bicornе tomentosum maximum, spicis numerosissimis. *Sloan. Jam. vol. I. tab. 15.*

1749.

June.

the beauty of the trees, with which it is adorned, and the meadows which it commands, all together afford a very agreeable prospect. The fishermen belonging to the place brought us some shell-fish, by the French called *machoirans* *, with eels and other fish which they had caught in their little river. We bought above five dozen, which did not stand us in three *deniers* a-piece. From thence we continued our voyage, meeting with a few more mangroves, on the right bank of the river, till we came within a league of a village called Maka, where these trees terminate.

Arrives at
the Musketoe
trading-
place.

The same day we arrived before sunset at the Musketoe trading-place; where was to be the sale of cattle. This be-

* Nhamdia Brasiliensibus, bagre do Rio Lusitanis. *Marogr.* p. 149.

Myxus cirrhis sex longissimis, pinnâ dorfi secundâ triangulari. *Gronov. Mus. Ichth.* p. 35. n. 84.

ing

ing the first port we meet with, in going up the Niger, the same is practised here, as at sea by those who pass the tropic: the French, the first time they come this way, are bound to make a present to the *laptots* *; and therefore I gave them the usual gratuity. The Musketoe trading-place is only thirteen leagues to the north $\frac{1}{4}$ north-east of the island of Senegal. This is a fruitful plain extending on both sides the river as far as the village of Maka, which we left behind us: the whole tract of ground, upwards of seven leagues in length, is laid out in spacious meadows, where the inhabitants breed a vast number of cattle. The name of *marigot*, of the Musketoes, is given to a small river, which falls into the Niger, a little below the trading-place; because it is full of very high and thick weeds, which serve to harbour a kind of Mus-

1749.

June.

Marin-
goins a sort
of Mus-
ketoes.

* This is the Name given to the Negroes in the service of the East India company.

ketoes

1749. ketoes called *maringoins*. Sometimes
 June. those little insects issue forth from
 these inaccessible places, in such swarms,
 that they darken the air. It is very diffi-
 cult to guard against them, because their
 sting will penetrate through the compact-
 est woollen stuffs ; and the multitudes of
 them that attack a person all at the same
 time, cause a prodigious pain, and throw
 the whole body, as it were, into a fer-
 ment. This is one of the greatest in-
 conveniences that all aquatic places are
 subject to.

Flocks be-
 longing to
 Moors.

The Moors waited for us, within two
 hundred paces of the north bank of the
 river, where they were encamped. All
 over the country, nothing was to be seen
 but numerous flocks of oxen, wethers,
 kid, and camels, which ranged about in
 full liberty. The day following I went
 on shore to view the oxen, which seem-
 ed to me very different from those of
 Europe ; for most of them were larger and
 higher legged ; but they were particu-
 larly

larly remarkable for a lump of flesh, which rose above a foot on the withers, between the two shoulders. The rams, (which they are not used to castrate) are also of a very peculiar sort. They bear no resemblance to our French rams, except in their head and tail; but as to their size, and hair, they are more like a goat: the latter animal has nothing remarkable. The flesh of both is extremely delicate, but often too perfumed. It seems that a fleece of wool would have been inconvenient to sheep in so hot a country; and therefore, nature has changed it for thin hair of moderate length.

1749.

June.

As I rambled among those numerous flocks, I found myself approaching towards the *adouar*; a name they give to a cluster of tents, where the Moors are lodged. These tents are all

Their
tents.

F

of

1749.

June.

of goats and camels hair, impenetrable to the rain. They were ranged near to one another in a circular form, each supported by a pole in the middle, and fixed all round with thongs of ox skin, fastened to stakes about a foot from the ground. The inside of them was hung with several rows of mats, secured on one side by the tents, and on the other by their moveables: the latter consist of a few borrachoes containing their cloaths, their milk, and butter; in short all their provisions, and a few pieces of calabashes, which serve for utensils.

Character
of the
Moorish
women.

While the men looked after their cattle, the women were confined to their tents, where they employed their time in churning butter, in spinning, and taking care of their children and other domestic concerns. They are of an olive complexion, with very regular features, and large sparkling eyes; their hair is long

long and plaited; some have it hanging down, and others tied up. They seemed to be well made, though small; and a great deal more reserved than the Negroe women. The men are not much taller than the Negroes; but they differ in their colour, which is red or a red brown; in their hair, which is of a middling length, curled, and much thicker; and especially in their muscles, which appear more under their skin: they have also a more meager face, with less flesh, and their skin is not so smooth. The dress both of men and women, consists in a long shirt of black linen, and a *paan*, with which the women cover their head and shoulders; the men sometimes roll it about their bodies like a waist-band, and sometimes round their heads, in imitation of a turbant. This *paan* is not always black and made of cotton; there are a great many men who wear it of white wool, and oftentimes edged

1749.
June.

Character
of the men.

Their
drefs.

1749. with red. I spoke once already of the
June. repast I made with the Negroes ; but
Their fru- the Moors are no way inferior to them
gality. in frugality. Their ordinary food is
milk, either of camels, cows, goats,
or sheep, with millet ; and very often
milk and gum alone is their whole re-
past, and serves them for meat and
drink.

Though two months were not yet
elapsed since my coming to Senegal, I
nevertheless had an opportunity of see-
ing, and forming some judgment, at
least as much as was necessary, for
the time present, of two nations, the
most distant in their customs and man-
ner of living, of all those that inhabit
this part of Africa, namely, the Moors
and the Negroes. In both, I had ob-
served great humanity and sociable-
ness, which gave me strong hopes,
that I should be very safe among
them, and meet with the success I de-
fired

fired in my inquiry, after the curiosities of their country.

1749.

June.

The next day I went a herborizing and coursing over the beautiful fields on the opposite bank of the river. At that time they were covered with a large kind of millet, called *guiar-natt* *, or *Guinea corn*: it was now almost ripe, and the Negroes had covered the ears with its own leaves, to shelter it from the sparrows, which do a great deal of mischief in this country. It was no small labour to walk across those spacious fields of millet, the stalks being very large and compact, and full eight feet high. The heat was quite stifling, for not the least breath of air could be perceived amidst those high plants; and the sun, at a very little distance from the zenith, darted his rays al-

Fields of
large mil-
let.

* *Milium arundinaceum*, subrotundo semine sorgo nominatum. C. B. *Pin.* 26.

1749. most perpendicularly. My Negroes, in
June. order to amuse themselves in this long
 walk, and to quench their thirst, pluck-
 ed several intire stalks of millet, and
 sucked the juice, after stripping it of
 its husk. They gave me some to taste,
 and I found it so sweet and pleasant,
 that I quickly followed their example.
 I do not at all doubt but the stalks of
 millet, prepared in the same manner as
 sugar canes, would afford a very proper
 juice for making sugar.

Village
 called De-
 pleur.

At length, after walking half an
 hour without seeing any thing but
 plants all round me, I arrived at the
 foot of a little hill, whereon was built
 a village, which the Negroes call
 Depleur. I had viewed it from the
 bank of the river, where it afforded
 a most delightful prospect. The foot
 of this hill was all of pure red sand,
 and intirely planted with gardens. At
 that

that time there were *giromons*, a fort 1749.
of mushrooms peculiar to hot coun- June.
tries, and not at all inferior in size Gardens
to those of cold climates, but great- belonging
ly superior in sweetness and delicacy of to the Ne-
taste. The two species of Indian *ket-* groes.
mia †, the green and the red, grow
there extremely well ; they are shrubs
four or five feet high, and resemble
ours only in the taste. The rest of the
ground is covered with tobacco, and
French beans.

From these gardens, I proceeded to
the village, without intending to make
any stay there, because it did not ap-
pear to me, to differ from those I had
seen already. As it is not much fre-
quented by the French, by reason of
its distance from the river, the little
children, who had never beheld any
The chil-
dren fright-
ened at
seeing a
white.

† *Ketmia Indica*, *gossypii folio*, *acetosæ sapore*.
Plum. Cat. p. 2.

1749. white people, were frightened greatly
 June.

at seeing me; and ran away as fast as they could, to seek for shelter between their mothers legs: at the same time they gave very loud cries, which did not frighten me much, because I soon discovered the cause. Yet I got a little out of the way, to avoid the frightful noise occasioned by my presence; when a woman, who saw me gathering fruit in the garden, thought to oblige me, by bringing me some of a sort greatly esteemed in that country. At the same time, she conducted me into the middle of the village, where stood the tree from which she had plucked them. It was very large, but not high: by its supple pendant boughs, and long thorns, I knew it to be the *agihalid* of Prosper Alpinus *: the Negroes call it

A very extraordinary scene happens to the author.

soumpe. As I stopped to view this tree, I was quickly surrounded by a number of boys and girls, whom

* Agihalid. *P. Alp. Ægyp. vol. ii. p. 20.*

curiosity had drawn together. Some out of respect, and some out of fear, kept themselves at a distance: others were familiar enough to come near me, and to ask for glass trinkets; for these, as I observed before, are the merchandise and ornament which the Negroes chiefly delight in. Most of them had never seen a white man so near; some touched my cloaths and my linen; others took hold of my hat, and of my hair which I wore in a bag, thinking it impossible it should grow to such a length as they saw it about my ears; others, in short, felt the bag itself, and asked me for tobacco, with which they thought it to be filled, because of its being so very like a little square leather bag, wherein they are accustomed to carry tobacco upon their breasts: but how great was their surprise, upon seeing me take off my bag, when my hair fell down to my waist. The liberty I gave them to examine

1749,
June.

1749. amine both, soon undeceived them, as
June. well in regard to the pretended use of
the bag, as to my hair, the length
of which they no longer doubted of,
when they saw it really fastened to my
head.

This extraordinary and unexpected scene, occasioned my making several reflections as I went from thence. It came into my head, that my colour, so opposite to the blackness of the Africans, was the first thing that struck the children: those poor little creatures were then in the same case as our infants, the first time they see a Negroe. I recalled to mind also, that the second thing which surprized the rest, was the length and thickness of my hair, compared to theirs, which looks like very fine curled wool: and in the last place, the weight and constraint of my apparel, which after all, consisted only of a very light callico waistcoat. The reader will no longer
be

be surprized that some of them should ask me for merchandize, and others for tobacco, when he is informed, that Negroes of every age, sex, and condition, are used to ask even the smallest trifles of the whites, when they cannot pilfer them. It is with good reason said, that they are the most artful beggars, and the most dexterous thieves, in the universe.

1749.
June.

Instead of following the road I had taken across the tiresome fields of millet, to go to Depleur, I returned by the meadow above them. I saw there only a few gum-trees, a prodigious quantity of tamarisks like those of Narbonne, the shrub *sesban* *, and a large species of sensitive plant, which the Negroes call *guerackiao*, that is, *good morrow*, because, say they, when you touch it, or draw near to speak to it, the plant immediately inclines

Plants in the neighbourhood of the Musketoe-trading-place.

* *Sesban*. *P. Alp. Ægypt. v. 2. p. 12.*

1749. its leaves to wish you, as it were, a
 June. good morrow, and to shew, that it is
 sensible of the politeness done it. Among
 the herbs with which the meadow is
 strewed, I took notice of the *jussiaea* *,
 of arsmart †, chickweed ‡, and several
 species of *mollugo*; of a great many sorts
 of grass, of the *coldenia* ||, and a small
 sensitive plant, rampant, and not spinous,
 infinitely more delicate and sensible than
 all the species that I know.

I did not neglect the following days,
 to visit the neighbouring villages and
 fields, where I found great plenty of
 a kind of shrub hitherto unknown to
 botanists, which the Moors call *guer-*

* *Jussiaea erecta*, floribus tetrapetalis octandris
 sessilibus. *Linn. H. Zeyl.* 170.

† *Perficaria maderaspatana*, longiore folio sur-
 futo. *Pluk. Phytogr. tab.* 210. *fig.* 7.

‡ *Alfina lotoides ficula*. *Bocc. rar. pl.* 20.

|| *Coldenia*. *Linn. H. Zeyl.* 69.

guer-

zim. I likewise discovered a considerable number of other new plants; 1749.
June.

but it would be of no use to mention them here, as I intend to give their description and figure in a particular work.

There are a great many wild boars in those parts, but I never could come up with any of them. I killed several of those birds, which the French call *large-eyes*: and indeed, they are of a largeness that has no sort of proportion to the head. In the form of their body, and of their feet, which are split into three toes, they are very like a bustard: they are as large as a hen, and their feathers are of an ash-grey, mixed with white. Their flesh is tender, and may be eaten. I could not avoid having very good sport in the meadow, for there is plenty of game: but it was interrupted every moment, by the loud and importunate cries of a kind of bird, Birds called *large-eyes*.

His sporting interrupted by noisy birds.
which

1749.
June. which the Negroes call *uett-uett*, the French, *squallers* or *bawlers*, because as soon as they see a man, they set up a loud screaming, and keep flying round him, as if their intent was to warn the other birds, which upon hearing the cry, immediately take wing. These birds are the bane of sportsmen, who are sure to find the place clear of all game soon after their arrival. In short, they put me into a passion, which cost them very dear; for as they always fly in pairs, I killed several brace. There were two sorts; and neither of them hardly exceeded the bigness of a pigeon; but they were high-legged, and had a very long neck. The colour of one was ash-grey, on the back and wings, the rest of their body was altogether white. The other had their wings and part of the tail black, and their shoulders were armed with a small horn of the same colour, very long, of the shape and hard
con-

consistency of a spur, which served them
as an offensive and defensive weapon
against the other birds.

1749.
June.

We were now in the eighth day of our voyage, when we finished our business, and thought of returning to the island of Senegal. The Moors, who had repaired to this place, only to sell their cattle, having foraged the country all round, were preparing to encamp on another spot, and even to retire towards the mountains, at a great distance northward of the river, to avoid the inundations with which the first rains of the month of June had lately threatened them. Their tents were already struck, and, they had put them, together with their furniture and utensils, into sacks of leather neatly dressed. The whole was loaded on the backs of camels and oxen, which carried their houses, moveables, wives and children. Such

Return to
the island
of Senegal.

Decamp-
ment of
the Moors.

is

1749. is the life the Moors lead; they are
June. never fixed to a spot: their flocks, in
 which consists their whole wealth, oblige them to change quarters, according as the seasons and the nature of their pasturage require.

30.
 First voyage to Podor.

Soon after my return to the island of Senegal, an opportunity offered of going to Podor, a factory belonging to the company, distant from this island sixty leagues or thereabouts, on the river Niger. The vessel was to go and return without stopping; yet I went on board. My Negroes did not want solicitation to follow me; so they joined with the ship's company. We set sail the 30th of June, ascending the river, nearly from west to east. The winds were so favourable, that we arrived in three days at Podor. As so expeditious a navigation did not allow me time to go on shore, I embraced this opportunity of taking a plan of the
 course

course of the river. I observed the different widths of its bed, and of the mouths of rivers that empty themselves into it, the angle which the latter form in their disemboguing, the islands we found by the way, and their length: I likewise sounded their depth; in short, I neglected nothing that was capable of rendering my observations most accurate. For this purpose I made use of the compass to mark the changes of direction in its course, measuring from time to time its velocity, or that of the vessel: sometimes I added to these two methods an estimate of the greatness of the distances, in which I had every conveniency, and met with all the success I could wish. If we except a few shoals here and there in the bed of the Niger, which may be easily avoided when the winds are not quite contrary, one is sure of finding it navigable throughout. Though it was then at its greatest ebb, yet it

1749.

June.

Precautions for taking a plan of the course of the river.

1749. was from twenty to thirty feet and
 July. more deep. The sea-water, which flows
 every common year as high up as the
marigot of the Musketoës, that is, a-
 bout fifteen leagues from the mouth of
 the river, had reached this year as far
 as the desert, that is, upwards of thirty
 leagues. This is about the distance
 where the salt water stops: but the
 tide is perceived a great deal higher
 up; it reaches as far as Podor, where
 it is visible by the rising of the fresh
 water, which is subject to the same
 vicissitudes of tide, but at less equal
 periods. The highest flood which I
 measured on the banks of the sea,
 near the island of Senegal, is but two
 feet and a half in the great equinoc-
 tial tides. It seems therefore that the
 Niger from Podor to the sea, that is,
 in a course of sixty leagues, has not an
 inclination of above two feet and a half;
 so that there is reason to believe that
 this intire tract of land, excepting the
 sand-

The tide
 is perceiv-
 ed at Po-
 dor,

above 60
 leagues
 from the
 coast.

sand-hills scattered here and there, forms ^{1749.}
 a plain excessively low and flat, and ^{July.}
 of such a level, that if the sea was to
 rise every where alike from twenty to
 thirty feet, the whole country would be
 overflowed.

The fort of Podor is built on the ^{Fort of}
 south bank of the river Niger, on a ^{Podor.}
 spot heretofore covered with wood; but
 the great quantity which the French
 have cut down for upwards of ten years,
 that they have been settled there, has
 removed the forest farther back to the
 distance of a small half league. Here
 are most beautiful tamarisks, red gum-
 trees, and several other sorts of thorny
acacia's, the wood of which is extremely ^{Wood of}
 hard, and in the colour and beauty of its ^{this coun-}
 veins, not unlike those which we use in ^{try.}
 inlaid work. The button-tree, of a very
 different species from that of America,
 grows here very common. The ease
 with which this tree receives the tool,

1749. and its fine yellow render it pre-
July. ferable to all other sorts of wood in
 Fertility of joiner's work. It is known among
 the foil. the Negroes by the name of *khofs*.
 The rich foil of this country is a
 great encouragement to gardening. And
 indeed the French have planted several
 which thrive amazingly, such as
 orange, citron, lemon, fig, and pome-
 granate-trees, besides guava's, anana's,
 papaws, and four-sops *, and a spe-
 cies of cashew-nut, which passeth for
 one of the best fruits-trees that grow
 in hot countries. The different le-
 gumes of Europe thrive here in great
 perfection. They have plenty of po-
 toes which multiply greatly in wet
 marshy lands, where they have been

* *Anona maxima*, foliis latis splendentibus,
 fructu maximo, viridi conoide, tuberculis seu spi-
 nulis innocentibus aspero. *Sloan. Jam. vol. 2.*
tab. 225. fig. 1.

once planted. This root serves them ^{1749.}
 instead of chestnuts, which it great-
July.
 ly excels in goodness and delicacy of
 taste. The acidity of the other fruits
 furnishes them with a juice, more suit-
 ed to the inhabitants of a warm cli-
 mate.

During the few days that I staid at ^{Remark on}
 Podor, the thermometer gave me one ^{the heats.}
 degree of heat more, than I had felt
 on the island of Senegal before my de-
 parture: it marked from thirty to thirty-
 one degrees. The fifth of July, it was
 still at thirty degrees at seven o'clock
 in the evening after sun-set, in the cold-
 est exposition of the open air to the
 north, declining to the east.

The same day two ostriches, which ^{Surprising}
 had been bred near two years in the ^{strength of}
 factory, afforded me a sight of so ex- ^{the ostrich.}
 traordinary a nature, as to deserve a
 place in this narrative. These gigantic

1749. birds I had seen only by the way, as I
July. travelled over the burning sands on the left of the Niger, but now I had a full view of them at my ease. Though they were but young, still they were very near of an equal size with the largest. They were so tame, that two little blacks, mounted both together on the back of the largest: no sooner did he feel their weight, than he began to run as fast as ever he could, till he carried them several times round the village; and it was impossible to stop him, otherwise than by obstructing the Passage. This sight pleased me so well, that I would have it repeated: and to try their Strength I made a full-grown Negroe mount the smallest, and two others the largest. This burden did not seem to me at all disproportioned to their strength. At first they went a pretty high trot; when they were heated a little, they expanded their wings as if it were

were to catch the wind, and they moved with such fleetness, that they seemed to be off the ground. Every body must some time or other have seen a partridge run, consequently must know there is no man whatever able to keep up with it; and it is easy to imagine, that if this bird had a longer step, its speed would be considerably augmented. The ostrich moves like the partridge, with both these advantages; and I am satisfied that those I am speaking of, would have distanced the fleetest race-horses that were ever bred in England. It is true they would not hold out so long as a horse; but without all doubt they would be able to perform the race in less time. I have frequently beheld this sight, which is capable of giving one an idea of the prodigious strength of an ostrich; and of shewing what use it might be of, had we but the method of breaking and managing it as we do a horse.

1749.
July.

1749.

July.

Departure
from Po-
dor.

Villages
bordering
on the Ni-
ger.

I was not so long in falling down the river to the island of Senegal, as I had been in going up to Pedor. The north-east winds, and the current of the streams, which had been considerably swelled by the late rains, proved so favourable to us, that we seized the opportunity to make the best of our way back, without stopping or going ashore. Yet I did not repent this first voyage; for I learnt thereby the many advantages I might derive from a second, and even from a third. In taking a plan of the river Niger, I had reckoned nine or ten villages on the north bank, and forty-seven on the south. A river from two to three hundred fathoms broad, the banks planted with trees of various kinds, and the leaves in perpetual verdure; the numerous droves of elephants walking on its borders; the sea horses, the crocodiles, with an in-

infinite multitude of other very extraordinary animals, and a far greater number of birds remarkable for the brightness and variety of their colours; all this together seemed to open an ample field for new and important observations.

1749.
July.

At my return to the island of Senegal the 15th of July, I perceived the effect of the rains, which had fallen in vast abundance for some days. The swell of the river was so sudden, that the 19th there was a return of fresh water at its mouth; where, two days before, the water was perfectly salt. This term serves to divide the year into two seasons, which differ very little from one another. The first is, when it does not rain at all, and when the waters of the Niger are spoiled by those of the sea: this begins in December, and ends in June or July. The second is, when it is subject to rains, and the

15.

He returns
to the
island of
Senegal.

Two seasons at Senegal.

river

1749. river water is fresh. The rains seldom
July. last more than three months; they begin at the end of June, and end in the month of September.

If the word Summer belongs to the hottest, and that of Winter, to the coldest weather; I cannot see the reason why all our ancient voyagers give the name of summer, to the dry season under the torrid season, and that of winter to the rainy season: for it is certain, and I know it by observations performed with the thermometer, during the space of five years, that the greatest heats are generally in the rainy season, to which they have given the name of winter. The French at Senegal, who perceived the error into which voyagers were fallen, attempted modestly to correct it, by changing the word *summer* into that of *low season*, that is, when the waters of the Niger are low; and they have given the name of *high season*, to
the

the winter of the ancients, because the waters of the Niger are then very high. Without examining into this error, which has been blindly embraced by most of the writers on natural history in our time, and being diffused through their principal works, has long had a considerable effect on the study of natural philosophy, and particularly on meteorological knowledge, a branch at this time so greatly embroiled: I shall be satisfied here with observing, that this mistake requires a severe animadversion. I shall therefore, with the French inhabiting Senegal, give the name of *low season* to that of drought, and *high season* to that of the rains: or still, in order to conform to the terms received in Europe, and to be understood by all the world, I shall distinguish the former by the name of Summer, and the latter by that of winter; so that these two seasons will be at Senegal, pretty

1749.
July.

1749. pretty much about the same time as in
July. France. These two are therefore the
 only seasons they are subject to; they
 know neither spring nor autumn. When
 I make use of the word Winter, the
 reader is not to imagine that they have
 any hail, snow or ice: these are things
 they are strangers to at Senegal; nor is it
 possible, whatever comparison you make
 to give the natives of the country the
 least idea of them. The winter in
 Senegal is only a season not so warm as
 the rest of the year, though it is always
 warmer than our summers in France, in
 we rarely see any snow or hail.

The win-
 ter in Se-
 negal is
 hotter than
 summer in
 France.

To return to the waters of the Ni-
 ger, which gave occasion to this short
 digression: they are salt one half of the
 year towards the island of Senegal. As
 the country is very low, and has neither
 rocks, or stones, but only quick sands,
 for this very reason it has no springs:
 they are therefore obliged to dig wells,
 which

Wells in
 the island
 of Senegal.

which indeed do not give them much trouble, for they find water within three or four, and oftentimes within two feet depth; but then it is brackish, that is, it has a saltish taste, communicated to the sands by the proximity of the sea.

The 8th of August the sun passed perpendicularly over our heads; and our shadows were exactly under our feet. This was the second time I beheld this phenomenon since my arrival at Senegal: the first time I saw it was on the fourth of May; and it was to return every year much about the same time. The heat it occasioned at its return from the tropic of Cancer towards the Equator, was much greater than that which we felt at its first passage: for the thermometer marked the nights of the month of May at 22 degrees, and the days from 26 to 28; whereas the nights of August were at 26 degrees, and the days at 32.

1749.
July.

August the
8th.
Passage of
the sun in
the Zenith.

The

1749.
August.

Negroes
canoes.

The ninth of August, and the following days, I walked about in the neighbourhood of the island of Senegal, and returned to the island of Sor, of which mention has been made already. Our European boats appearing to me too heavy and cumbersome, to make use of them every day in passing that river; I therefore thought proper to exchange them for a kind of Negroe canoo, which the French call *pirogue*. These little boats are made all of one piece of wood, that is, of the trunk of a tree cut into a hollow vessel, and very light. They are from ten to thirty feet long, from one to two feet in breadth and depth, and both ends terminate in a point. Mine was one of the largest. As soon as I got into it, my two Negroes placed themselves at both extremities, one at the prow and the other at the stern. For my part I put myself in the middle, where I had no other seat but

1749.
August.

but a piece of wood laid a-crofs, which was fastened at both ends into the fides of the *piroque*. My Negroes had each a paddle in their hands: these are small flat boards, laid a-crofs one another, and fixed to the end of a stick, which they make use of for rowing. The Negroe at the prow was standing, and beat the water behind him with his paddle: the other was seated, and steered with his. As soon as we reached the opposite shore, they drew the *piroque* a-ground: this is the only way the people of the country have to secure these little vessels against the waves, which would soon fill them with water; whereas they cannot so much as wet them, when they are far enough from the shore.

I was not long in crossing over, and immediately I directed my steps to the village of Sor. There I met with a very good reception, according to custom;

1749. tom; and I desired they would shew
 August.

me the properest places for coursing. That very day I had dismissed my interpreter; because I had acquired a sufficient smattering in the language of the country, to be able to understand all that the Negroes said to me, and to explain my mind to them. They carried me to a particular spot, where I saw a herd of antilopes; but I laid a-side all thoughts of sport, as soon as I perceived a tree of a prodigious thickness, which drew my whole attention. This was a calabash-tree *, which the Jaloffes call *goui* in their language. There was nothing extraordinary in its height; for it was only about sixty feet: but its trunk was of a prodigious thickness. I extended my

Trees of a
 prodigious
 thickness.

* Bahobab. P. Alp. vol. ii. p. 37.

arms,

1749.
August.

arms, as wide as possibly I could, thirteen times, before I embraced its circumference; and for greater exactness, I measured it afterwards round with packthread, and found it to be sixty-five feet: consequently the diameter was near twenty-two. I do not believe that the like was ever seen in any other part of the world; and I am persuaded, that if our ancient voyagers had been acquainted with this tree, they would have added some surprising circumstances to its description. It is very extraordinary, that this tree should have been entirely forgot by those who have given us the history of Senegal; especially, as there is hardly any other so common in the country. Out of the trunk I have been describing, of twenty-two feet in diameter, and from eight to twelve feet high, there issued forth several branches, some of which extended themselves horizontally,

1749.
August.

tally, so that the ends of them reached the ground : these being the largest, were from forty-five to fifty-five feet in length. Each of those branches would have made one of the largest trees in Europe ; in short, the whole of this calabash-tree seemed to form a forest of itself. This was not all : the Negroe, my guide, led me to a second, which was sixty-three feet in circumference, that is, one and twenty in diameter : and one of its roots, which had been for the most part laid bare by a neighbouring river, was a hundred and ten feet in length, without reckoning the part that lay hid under the water, and which I could not uncover. The same Negroe shewed me a third, not very far from thence ; and moreover added, that without going out of the island, I might see a great many more, not at all inferior to those in magnitude.

tude. My surprize was then at an ^{1749.}
 end; and, fatisfied with seeing three, ^{August.}
 I got ready for the chace.

I was prevented from going farther ^{The 'au-}
 by an easterly wind, which rose all of a ^{thor fur-}
 sudden with such fury, that it seemed ^{prized in}
 as if it would tear up the trees by the ^{a violent}
 root. These gusts of wind are generally ^{storm.}
 fore-runners of rain; and this brought
 a thick cloud along with it, which
 burst immediately. The village was
 at some distance, so that there were
 no hopes of reaching it time enough.
 My Negroes seeing there was no place
 of shelter for them, threw off their
paans, and plunged into a little ri-
 ver which passed close by the spot.
 This is their custom, whenever they
 are caught in a storm, to jump into
 the water, rather than run the risk
 of being wet by the rain, dreading its
 bad effects. For my part, having
 H 2 neither

1749. neither time nor inclination to follow
August. them, I retired under one of the
largest calabash-trees then in sight, reckoning I should be as safe there as under the roof of a house. The rain poured down with such violence, that it seemed as if heaven and earth were coming together; every drop that fell, expanded itself a whole hand's breadth on the ground. I felt nothing of the first efforts of this storm: but a few minutes after, when the tree came to be well soaked, I was overwhelmed by the water that gushed out of its branches; and their different situations formed so many beds, from whence rushed forth whole torrents, which uniting on the vast surface of the trunk, discharged themselves from thence like a river. The reader may easily imagine, I could have no fine time of it, to stay under this tree; I therefore got away from thence as quick

quick as possible, and stood in the open field, where I did not fare much better : for I was exposed to the whole violence of the storm, which lasted a full hour ; and at my return to the island of Senegal, I was informed, that there fell two inches three lines of water.

1749.
August.

The river Niger being arrived at its highest increase, overflowed all the country round the island of Senegal, so as to render it impassable. Being therefore obliged to relinquish my walks, I saw but one way to employ the long interval of time that the inundation was to last ; and this was, to go over to a country not subject to be overflowed. A vessel was ready to sail for Goree, a small island, distant about thirty-five sea leagues, south-south-east from the island of Senegal, and very near Cape Verd. I thought I could

1749.
August.

27.
He em-
barks for
the island
of Goree.

Ignis fa-
luns.

do nothing better than to embrace so favourable an opportunity; and therefore I embarked. We put to sea the 27th of August, with the wind to the westward, and not all favourable; but a sudden storm * bursting upon us one night, with a terrible east wind, drove us with such violence, that only putting right before the wind, without any sail at all, we made more way than we had done for seven days before. During this tempest we saw a light, which the mariners call the fire of St. Elme: it winded near a minute about the top of the mast, and the extremity of the weather-flag, and then it dispersed. The sailors looked upon it as a lucky omen, which encouraged them to hope that the tempest was

* We give this name to all tempestuous gusts of wind, accompanied with rain, thunder, and lightning; and we make use of the word *dry storm*, to distinguish those gusts that are without rain.

near

near at an end, and they were not deceived in their expectations. The wind subsided soon after, and the sea was restored to its former tranquillity.

1749.
September.

The fourth of September, by break of day, we found ourselves off Cape Verd: this to me was a new sight, who during four months that I had been at Senegal, had seen no such thing as hills, and especially of stone. Soon after this, we espied the Magdalen islands, and that morning we cast anchor in the bay of Goree. This island consists of a low narrow piece of land, and a small but very steep mountain, the whole the sixth part of a league in length. Notwithstanding its confined extent, the situation renders it a very agreeable place: towards the south you enjoy a prospect, terminated only by the sea; northward, you discover at a distance

September
the 4th.
Sight of
Cape Verd.

He arrives
at the
island of
Goree.

Descrip-
tion of this
island.

1749. tance Cape Verd, and all the other
September. capes and neighbouring promontories.
Though it is in the torrid zone, yet they breathe a cool and temperate air almost the whole year round: which is owing to the equality of days and nights, and its being continually refreshed by alternate breezes from the land and sea. M. de S. Jean, the director of this island, has embellished it with several fine buildings: he has likewise fortified it, and is adding every day to the works; so that it is now become impregnable *. By his diligence, several fresh springs have been discovered; the gardens have been planted with excellent fruit-trees; legumes have been made to grow in great plenty; in short, by these different advantages, of a small barren island, he has made it a safe and delightful residence. I had been recom-

* Commodore Kepple has lately demonstrated our author's mistake.

mended

mended to him by M. de la Brue, his brother, director-general of the Settlement, and I could not but in consequence meet with every kind of encouragement.

1749.
September.

The rocks with which the island of Goree is surrounded, produce an infinite number of shell and other fish, which amused me for some days: after which I embarked the 13th of the same month, on board a small vessel, bound to Portudal, in order to trade for oxen and millet. This Port, which the negroes call *Sali*, is only nine leagues south of the isle of Goree. The bar obliged us to anchor within half a league of the shore, that we might not be dashed to pieces. A *pirogue* landed me without any accident.

Voyage to
Portudal.

I found the soil sandy, but of amazing fertility, and all covered with wood.

Wood of
this coun-
try.

The *grewia* *, a species of *polygala*,

* Unknown to Europe.

the

1749. the *rebbeup* *, and the *dembout-*
September. *tonn* †, formed a kind of copse, over
 which the *monbins* ‡, or hog-plum-
 trees, known by the name of *job* in
 the language of that country, raise their
 heads, loaded with fruit. By its leaves,
 this has something of the appearance
 of an ash-tree; but it is soon known
 by its fruit, which in size, shape and
 colour, resemble the plumbs of St. Ca-
 tharine: they were ripe at that time;
 and I eat some of them, which had
 a sharp, aromatic and very agreeable
 taste. I saw also in those parts, several
 spinous silk cotton-trees ||, known to
 the inhabitants by the name of *benten*,
 and many other large trees. The Ne-
 groes had cut down a good deal of

* † Trees unknown to Europe.

‡ Monbin arbor foliis fraxini, fructu luteo race-
 moso. *Plum. gen. p. 44.*

|| Ceyba viticis folio, caudice aculeato. *Plum.*
gen. p. 42.

this

this wood to low fields of small millet; and it was then almost at its full maturity. ^{1749. September.}

All this fine country abounded with birds of the greatest beauty. ^{Beauty of the birds.} The jay which I mentioned already *, was there in flocks: the brightness of its azure feathers, joined to the lively yellowness of the birds called cardinal sparrows, with which all the fields were covered, had an admirable effect. Here was the only kind of snail † that ever I observed in the whole country. I found it very frequently in an open meadow, full of rushes and sea ambrosia: I saw even many of them alive, at the foot of the neighbouring trees, where they were enjoying the shade. It is a thing worthy

* Page 24.

† See the natural history of *univalve shells*, kind 5th; the snail, plate I, fig. 1. *Kambeul*.

1749. of observation, and which doubtless
September. will appear surprizing, that in such a
 vast extent of wooded country, there
 should be but one sort of snail, while
 we meet with so great a variety in tem-
 perate climates.

The French have never a factory at
 Portudal; but when they go to trade
 there, they land at the *Alker's*, or the
 governor of the village, who owns a
 great number of cottages. He appointed
 one for me, where I took up my quar-
 ters. One night when I was fast asleep,
 I was wakened by a horrid shrieking,
 which threw the whole village into an

uproar. Immediately I inquired what
 was the matter; and was told, that
 they were bewailing the death of a
 young woman, who had been bit a-
 bout four leagues off by a serpent, and
 died of the poison in less than two
 hours;

Death of a
 Negroe
 woman.

hours; and that her body had been 1749.
just now removed to her cottage. The September.
first shriek was made, according to
custom, by one of the female rela-
tions of the deceased, before her door,
which was very near to mine. At
this signal, all the women in the vil-
lage came out, and setting up a most
terrible howl, they flocked about the
place from whence the first noise had
issued. One would have imagined, that
they were all related to the decea-
sed, so greatly did they seem to grieve
and mourn; and, undoubtedly, this
would have been a strong proof of
their concern, if those lamentations had
come from the bottom of their hearts:
but they were no more than outward
show, and merely the effect of national
custom. This shocking noise lasted some
hours, that is, till break of day: then
the relations of the deceased coming
into

1749. into the cottage, took hold of her hand,
September. and asked her several questions, which
 were followed by offers of service: but
 finding that she made them no an-
 swer, they withdrew, saying: Alas!
 she is dead. Her friends did the same;
 afterwards they conveyed her body
 into the ground; and on each side
 they put an earthen pot, one full of
 water, and the other of *consious*: this
 without doubt was intended for her
 nourishment, in case she should once
 more take it into her head to eat or
 to drink. When the burial was over,
 the cries, and lamentations ceased. Thus
 ended the lugubrious ceremony: their
 thoughts were now turned towards
 making an entertainment in honour of
 the deceased; and that same evening
 they had a *folgar*, or a dance, which
 they continued for three nights succe-
 ssively: it was conducted in this man-
 ner:

Ceremo-
 nies at
 their fune-
 rals.

Dance up-
 on this oc-
 casion.

All

1749.

September.

All the young people of the village gathered together in a large area, in the middle of which they had lighted a great fire. The spectators formed a long square, at both ends of which the dancers were ranged in two opposite lines, the men on one side, the women on the other. There were two tabours to regulate the dance; and as soon as they had beat a march, the performers began a song, the burden of which was repeated by all the spectators. At the same time a dancer stepping forth from each line, advanced towards the opposite person that pleased him most, to the distance of two or three feet, and presently drew back in cadence, till the sound of the tabour served as a signal for them to come close, and to strike their thighs against each other, that
is,

1749. is, man to woman, and woman to
September. man: this done, they drew back once
more, and soon after renewed the same
monkey tricks, diversifying their move-
ments as often as the tabour directed
them, till at length they returned to
their place. The other performers did
the same, each in their turn, but without
a repetition; then the two lines drew
near to one another, and acted their
part in the same manner. That these
gestures are very immodest, is obvious;
but the other movements, which are
hardly perceived, unless one is used to
them, must be much more so. The Ne-
groes do not dance a step, but every
member of their body, every joint,
and even the head itself, expresseth a
different motion, always keeping time,
let it be never so quick. And it is
in the exact proportioning of this in-
finite number of motions, that the Ne-
groes dexterity in dancing chiefly con-
sists:

sists: none but those that are as ^{1749.}
 supple as they, can possibly imitate September,
 their agility. Notwithstanding the violence of this exercise, it lasted a good part of the night, during which they drank off several pots of a very strong sort of beer made of millet. They began the same scene the two nights following, and the third their entertainments ceased. An European, on such an occasion, would have gone into mourning for some months; while the African seizes this opportunity to rejoice: such are the whimsical customs of different nations; what produceth joy and pleasure to one, is a subject of grief to another.

I had landed very easily upon my ^{Passage}
 arrival at Portudal, because the sea ^{over the}
 was gentle and calm: but at my ^{bar of Por-}
 return I was much embarrassed ^{tudal in a}
 I ^{pirogue.} how

1749. how to reach our vessel ; as there
September. was then a great swell, and the agitation of the waves upon the bar, rendered it very dangerous and difficult to get over. We ventured nevertheless in a large *pirogue*, the agent for the company, a few passengers, and myself ; who were prepared to empty the water as fast as it came in, with half calabashes. The boat was thus laden, when a wave drove on shore, and lifted it off, with the assistance of four Negroes, all good swimmers ; they pushed it forwards with their whole might, and leaped in as fast as the part where they were to row entered the water. We soon found ourselves in a very high sea, when the waves swelling like a ridge of hills, drove against the *pirogue*, and washed it all over. We worked hard, and with great resolution, to empty it again ; and indeed we had
enough

enough upon our hands, while the 1749.
 Negroes rowed with all their might, September.
 to avoid the waves, which came rolling upon them. Now the *pirogue* raised its prow upon the back of a billow, while its stern sunk deep into the water: now it was supported as it were at both ends on the edge of two different waves: now only the middle of it was suspended upon a rolling surge, so that the extremities seemed to be poised in the air. In this manner, apprehending every moment to be overfet and inevitably lost, we got over the bar, with great good fortune, and went on board the vessel, which carried us to the isle of Goree, where we arrived the 24th of September, about night fall.

Two days after, M. de Saint Jean, Excursion to the Magdalen islands.
 intending to favour me with an excursion to the Magdalen islands, distant

1749. ^{September.} stant a league from Goree, fitted out a vessel, on which I embarked along with him and some officers of his department. Of these two islands only one is accessible; the other is a naked steep rock, very high above the surface of the water, and all white with the ordure, which plungeons, gulls, and other sea-fowls, leave behind them. The chief Magdalen island, though small, might be inhabited, if it had but a harbour; but it is accessible only by a small creek, full of rocks, and generally tempestuous. This creek forms a kind of long canal, which terminates in a natural basin of an oval figure, hollowed in the rock, twelve feet deep, and twelve fathoms long, with transparent water, where one may bathe in safety. The island is only one continued mountain, almost round, and like that of Goree: it has also two small springs which are dried up in the winter. The prospect from thence is very beautiful

ful and extensive, and the air extremely fresh: but it would not be worth while to stay there for this alone. Its rocks serve for a receptacle to an infinite number of ringdoves, natural to that country, and which differ from those of Europe, only in the superior delicacy and taste of their flesh.

1749.
September.

Having already observed that the Negroes are negligent and idle to excess, I shall give here another proof of it. M. de Saint Jean had caused some potatoes to be planted in this island, in order to engage the neighbouring Negroes, who come hither very often, to continue and improve the culture of them, by which means they might sell them afterwards to the company. Accordingly they came a few days before us, and carried away all the potatoes, without minding to plant the off-sets again, which we found lying

Indolence
of the Ne-
groes.

1749. upon the ground, dried up with the heat
 September. of the sun.

Plants on
 this island.

The most remarkable plants on this island, were the same as those which I had observed at Goree. Below I saw several new species of *spermacoce* and *helianthemoides*, which the French call *salade de matelots*, that is, sailor's salad, because they eat the leaves of it like purslane, which it resembles in taste. Higher up, there were *corchorus*'s, or Jew's mallows *, and a great deal of bindweed with cut leaves. The summit of the mountain was covered with variety of shrubs, such as *palma Christi*'s, *tapia*'s †, and stinking cassia, among which there was great plenty of *dracunculus* ‡, as also of *ornithogalum* with

* *Corchorus five melochia*. J. B. 2. 982.

† *Tapia arborea triphylla*. Plum. gen. pag. 22.
 In English, The garlic pear-tree.

‡ *Arum polyphyllum ceylanicum*, caule scabro,
 viridi

with green leaves, and a very pretty 1749.
 species of amaranthus *. There were September
 also some calabash trees from five to six
 feet diameter: they had all of them
 European names, with the letters cut
 very deep into the bark. We did not
 not chuse to deviate from the custom,
 therefore each man cut his name. For
 my part, I was satisfied with repair-
 ing two of them, which were old
 enough to deserve the trouble: one
 was dated the fifteenth, and the other
 the sixteenth century. The letters were
 about six inches long; but in breadth
 they occupied only a very small part
 of the circumference of the trunk;
 from whence I concluded, they had

viridi diluto, maculis albicantibus notato. *Comm.*
Hort. Amst. vol. i. tab. 52.

* *Amaranthus verticillatus minor, Bengalenfis*
serpylli foliis incanis. Plut. phytog. tab. 10. fig. 3.

1749. not been cut when those trees were
 September. young. However, these inscriptions are
 Age of the sufficient, I think, to determine pretty
 calabash nearly the age which these calabash
 trees. trees may live to; for, if we suppose,
 that those in question were cut in
 their early years, and that they grew
 six feet in the space of two centuries,
 one may reckon how many centuries
 are requisite, for their shooting up to
 five and twenty feet, which is the
 last term of their growth.

After spending three days agree-
 ably in herborizing on the island of
 Magdalen, and in observing the beau-
 tiful shells which it produces, we re-
 turned to Goree, from whence I set
 October 2. sail the 2d of October for the island
 Departure of Senegal. Ten days was I de-
 from Go- tained at sea, by contrary winds at
 ree for the N. E. which would have made me
 island of extremely uneasy, had they not affor-
 Senegal. ded me an opportunity of making a
 very

very important observation. The 6th 1749.
of the same month, at half an hour October.

past six in the evening, we were about fifty leagues from the coast, when four swallows came to take their night's lodging in our vessel, and pitched upon the shrouds. I caught them all four with great ease, and found them to be European swallows. This lucky incident confirmed me in the suspicion I had formerly entertained, that those birds crossed the sea to get into the torrid zone, as soon as the winter approached: and indeed I have observed since, that they are never seen but at this time of the year at Senegal, along with quails, wag-tails, kites, and some other birds of passage, which go thither every year, when the cold drives them away from the temperate countries of Europe. Another fact not less worthy of remark, is, that the swallows do not build their
nests

1749. nests in Senegal as in Europe ; they
October. lie every night, two and two, or single,
on the sea-shore, which they seem to
like better than inland places.

Flying
fishes.

I was likewise amused in this long
passage with looking at the flying fishes.
It was then their season, and the sea
was, in some measure, filled with them.
In size they are equal to a gudgeon
or a whiting : they have two fins
almost as long as their whole body,
which serve them for wings to fly upon
the water. The gold fish and bonitoe
are extremely greedy of the flying fish,
and at that time were in full pursuit
of them ; so that every minute you
might see little clouds of the latter
rising above the water, and endea-
vouring to avoid their cruel enemies.
As they balance themselves in the air,
merely by the humidity of their wings,
their

their flight was very short: a great many of those that had flown above the ship, fell down again; and we caught a considerable number of them, without any further trouble. I eat some, which I found very tender and well tasted.

1749.
October.

I arrived at Senegal the 12th of October, when the trees, the fields and the meadows, felt equally the effects of the freshness of the season, occasioned by the rain; and the eye was delighted with an agreeable verdure, which had succeeded a frightful drought. The rains were over: and as the bed of the Niger began to fall, the voyage to Podor seemed of course more practicable. I could not seize on a better opportunity for my researches on the banks of that river; and therefore I thought of taking a second trip to that place. I knew that as the winds are seldom favourable at this season

12.
Arrives at
the island
of Senegal.

1749. feafon of the year, our voyage would
October.

23.
Second
voyage to
Pedor.

not be very expeditious Flattering my-
self therefore, with the hopes of great
fuccefs in the obfervations I was about
to make, I embarked the twenty-third
of the fame month. It is common for
the veffels that undertake this voyage, to
provide themfelves with wood over-
againft the point of the ifle Biféche, in
a place that has fince retained the
name of the Wood-ifland, within a
fhort league of Senegal. Here we
ftopped at a very agreeable fpot, where
the veffel entered with all eafe among
the mangroves, and was fhaded with
their verdant foliage. While we were
taking in our wood, I went afhore
on the ifland, which by the inunda-
tion had been rendered one continued
flough or morafs. On each fide I fmelt
a delicious fragrancy, the caufe of which
I could not divine, till advancing into
the wood, I arrived half-knee deep in
water,

water, at a spot which I saw all covered with a kind of mushroom, different from the Ægyptian. It was then in blossom, and diffused, as I observed before, a most pleasing odour.

1749.
October.

From this place to the village of Maka, both banks of the Niger are so covered with mangroves, that it is impossible to walk on foot. As we had no wind, the *laptots* were obliged to hawl the vessel with a rope, up to their waist in water, and sometimes deeper. At first we advanced five or six leagues a day, before we reached the Musketoe trading-place, because the river runs almost north and south, till it comes to that place, and the winds were not quite contrary: but from thence to Podor, it changes its direction from west to east, and with a good deal of difficulty could we proceed three leagues a day. One time we were retarded by a shoal; another time

Difficulties
of ascend-
ing the
Niger.

1749.
October. time the trees along the banks hindered the hawling of the vessel, and a good part of the day was spent in towing it *. As these obstructions afforded me time and opportunity to reconnoitre the country, I went on shore morning and evening, where I pierced my way through the woods, and traversed the morasses and the fields, herborizing and courting all the way; so that I never returned empty handed. In one place, a plant, or an insect, stopped me; in another, some extraordinary quadruped, or some bird decked with the most beautiful feathers; every object that offered itself to my sight, was new to me.

Prodigious
number of
crocodiles. A little above the Musketoe trading-
place, I began to see crocodiles: when

* To tow a vessel, is to draw it by a rope fastened to a tree, or to an anchor, which is let drop into the water.

I say I began to see them, I mean by 1749.
hundreds; for there are some towards October.

the island of Senegal. But this spot seems to be their general rendezvous, even of the very largest: for I have beheld some that were from fifteen to eighteen feet long; and I do not know that there are any above this size. There were upwards of two hundred, which appeared all at the same time above water. As the vessel passed that way, they were frightened, and immediately plunged their heads into the river, but rose again very soon to take breath, because they cannot keep more than a few minutes under water. When they swim on the surface, you see only the upper part of their head, and a small part of the back; at which time they bear not the least resemblance to live creatures; but one would take them for the trunks
of

1749. of trees floating on the river. In this
October. attitude, which leaves them the use of
 their eyes, they see what passes on
 both banks ; and as soon as they
 perceive any animal coming to drink,
 they plunge under water, and swim
 up to it with the greatest expedition ;
 then seizing it by the leg, they drag
 it into the stream, where it is soon
 drowned, and then they devour it.

We had not yet advanced five and
 30. twenty leagues the 30th of October.
 Walk near Gandor. That morning I espied a very beautiful
 plain to the left of the river Niger,
 opposite the village of Gandor ; pleased
 with the prospect, I went a-shore, but
 soon had reason to repent it. After
 having walked about an hour, I found
 the passage stopped up by the *marigot*
 of Ouafoul, which was then very con-
 siderable. The river makes an elbow

a little above this spot. The ship's company finding the wind favourable,

1749.

October.

had gained above a league upon me, and had no thoughts of waiting not knowing the perplexity I was under. And yet I was obliged to come up with them. I had taken with me only a Negroe of Banbara, who had offered his service on the occasion: for it is not to be imagined what difficulty I had to prevail on any of those, who had once made an excursion with me, to attend me again: they were but too sensible of the risks I ran; and they did not receive pleasure enough, to like a share of my toils.

With my Banbara I advanced about half a league through a morass, formed by an inundation of the waters of the *marigot* on those low lands, from whence I extricated myself with difficulty, wading up to my knees in wa-

K

ter,

1749.
October.

Serpents of
a very ex-
traordi-
nary size.

ter, and meeting every minute with prodigious large serpents, especially of that species whose bodies are surprizingly thick in comparison to their length. I avoided those animals as soon as I espied them; but my Negroe heartened me, by affirming they were not noxious. I shot one very near me, that was almost a foot diameter, and eight and a half in length. The Negroe threw it over his shoulders, reckoning to feast upon it with his comrades.

The au-
thor stopt
by a *ma-
rigot*.

When I had advanced a few steps towards the bed of the *marigot*, I entered, though I had my clothes on, into the water up to my waste. But I did not care to go further, as I might have met with some hole, which would have embarrassed me greatly. I therefore sent my Negroe to sound the bottom; and in the mean while I got upon a tree, in order to avoid the serpents, and the water,

water, which began to fatigue me. 1749.

October.

After founding three different places, he was of opinion, he could carry me over a particular spot, where the water came up only to his nostrils, when he stood on tip-toe. The fellow was tall, being six feet some inches. I mounted upon his shoulders, with my gun in my hand, a few birds, and a bundle of plants.

He was soon in the water up to his neck; and I was not without some apprehension, when I saw myself descend gradually up to my waist: however, I resigned myself to his skilful guidance, or rather to my own good fortune, and I let him do as he pleased. He waded through the middle of the *marigot* with amazing resolution, without being in the least daunted, though he was obliged to swallow three large gulps of water, which for some time took away his breath.

He passes over on the Negroe's back, in danger of his life.

As soon as I escaped this danger, I

1749. espied a plant of very extraordinary
October. beauty, floating on the water: this
 was a *cadelari* *, with soft silver leaves.
 That moment I forgot every other
 object, and though my Banbara was
 still up to his chin in water, I ven-
 tured to pluck the charming plant.
 Thus I escaped very luckily out of
 the *marigot* of Ouafoul, which at that
 time was very near a hundred and
 twenty fathoms broad, that is, about
 twice the breadth of the Seine at Pont
 Royal; and I overtook the vessel be-
 fore noon.

That very evening, doubting whether
 I should be able to find my way on
 the side of the river, where I had run
 such risk in the morning, I landed on
 the opposite bank, but was not more

Forests of reeds im-
 passable. fortunate. Every now and then I met

* *Cadelari. Hort. Mal. part. 10. pag. 155.
 tab. 78.*

with

with forests of reeds from ten to twelve feet high, which tried my patience to the full, when I was obliged to go through them. There was no sort of path; and in many places the reeds stood so thick, as to deprive me in a manner from seeing either sky or land.

1749.
October.

The following days I spent more agreeably: we arrived in those parts, where the hippoptami, or sea horses, are very common. This is the largest of all amphibious animals, and is to be found no where but in the African rivers, in fresh water: and one thing worthy of observation is, that it has been never seen any where else but in this part of the world, to which it seems particularly to belong. It is commonly drawn in the figure of an ox, which indeed is the animal it resembles most; but its legs are much shorter, and its head is monstrous

Hippopta-
mi, or sea
horses.

1749. large. In regard to its size, the sea
October. horse may take precedence after the
elephant and the rhinoceros. Its jaws
are armed with four large tusks, where-
with it loosens the roots of trees, on
which it feeds. It cannot abide long
under water, for want of respira-
tion; which obliges it to carry its
head now and then above the surface,
in the same manner as the crocodile.
It neighs much in the same manner
as a horse, but with such vehemence,
that it may be heard very distinctly a
quarter of a league off.

Second
species of
crocodile.

In this very neighbourhood, besides
the sea horse, there is a second spe-
cies of crocodile, not at all inferior
to the other in dimensions. It is di-
stinguished by its colour, which is
black; and by its jaws, which are a
great deal longer than the others: It
is also more carnivorous; and is even
said to be greedy after human flesh.

The

1749.

October.

The vessel sometimes plied on one, and sometimes on the other bank of the river, which were all along bordered with shrubs, commonly of willows, or sallows, covered with bind-weeds, or dog's-bane, of several kinds, which after creeping round their branches, hung their sprigs, loaded with flowers of various colours. At the foot of these shrubs waved the persicaria, also in flower. Thus I sailed along a charming meadow, on which were feeding a multitude of grass-hoppers, whose beautiful green, variegated with the liveliest red, had an admirable effect. Further on, the palmettos reared their lofty heads above the *semeliers* * and *acacia*'s, which overspread the rest of the ground. In short, nothing could be more beautiful than the prospect, with which my eye was refreshed, the space of fifteen leagues and

Beauty of
the Niger.

* A species of *baubinia* not described.

1749. upwards, from the desert to the vil-
October. lage of Bokol. And indeed this would
 be the most agreeable river in the
 world, were it not for the continual
 apprehension from the crocodiles, and
 sometimes from the sea horses with
 which it abounds.

Rondier, a
 species of
 palm-tree.

The abovementioned palmetto is what
 the Negroes call *ronn* †, a name which
 the French have been pleased to change
 into that of *rondier*. Its trunk is very
 large and straight, like a column from
 fifty to sixty feet high, from the up-
 per end whereof issues forth a bun-
 dle of leaves, which, in turning off,
 form a round head : each leaf represents
 a fan of five or six feet in expansion, sup-
 ported by a tail of the same length. Of
 these trees some produce male flowers,
 which are barren : others, called female,
 are loaded with fruit, which succeed each
 other uninterruptedly, almost the whole

† Carin-pana. *Hort. Malab. vol. i. p. 11.*
tab. 9.

year round. They brought me several of the bigness of an ordinary melon, but somewhat rounder. They were inve-
lopped in two skins as tough as leather, and thick as strong parchment; within-side the fruit was yellowish, and full of filaments, fastened to three large kernels in the middle. The Negroes are very fond of this fruit: when it is baked under the ashes, it tastes very much like a quince; it has a pretty strong scent, but extremely agreeable.

1749.

October.

The Niger willow is different from Willow. the European. It has the trunk and the weakness of the osier; but its leaves are very short, and made round at the ends. The Negroes give it the name of *kelele*: of all the trees in the country, it is one of the most respected; its younger branches pass into the hands of ladies, who make pick-tooths of them. And for want of these, which leave a little
bit-

1749. bitterness in the mouth, they use the
November.

branches of some other fine scented trees.

These different sorts of pick-tooths are called *sokiou*.

November

5.
Excursion
in the
neigh-
bourhood
of Daga-
na.

I saw every day so great a number of elephants all along the banks of the river, that the sight was no longer a surprize to me. The fifth of November, as I was walking in the woods over-against the village of Dagana, I perceived a number of their footsteps very fresh. I traced them close almost two leagues, and at length I discovered five of those animals, three of which were weltering in their filth like swine, and the fourth was standing up with its little one, eating the ends of the branches of an *acacia*, which it had but just broke. By comparing the height of the tree against which this elephant stood, I judged that it was at least eleven or twelve feet, from the sole of its foot to the buttocks: its tusks projected the length of near three feet.

Though

Though those animals did not appear to be affected at seeing me, yet I thought it adviseable to retire. Continuing my journey, I found very strong impressions of their footsteps, which I measured, and they were near a foot and a half diameter. Their dung was a good deal like that of a horse, and formed balls seven or eight inches thick.

1749.
November.

The next day I had an infinite pleasure in visiting the beautiful fields on the side of Bokol. First of all I walked under trees full of green monkeys, whose gambols were very diverting. Next I came to a place abounding with game, where I had excellent sport. From thence I entered into a little thicket near a morass, which drew whole flocks of Guinea-hens. While I was lying in ambush in this spot, I espied one of those enormous wild boars, peculiar to Africa, and of which I do not remember, that any natural historian has made mention. He was coming full drive

Green
monkeys.

wild
boars.

1749. drive at me, and would have certainly
November. overtaken me, if I had not warned him,
as it were, to direct his steps another
way, by the noise I made in taking
aim at him. He was black like our
European wild boars, but a vast deal
larger. He had four great tusks, the
two uppermost of which were bent into
a semicircle towards the forehead, where
they resembled the horns worn by other
animals.

Danger
and fa-
tigue in
the voyage
to Podor.

The nearer I drew to Podor, the
more I was exposed to danger, because
the banks of the Niger are more lone-
some, especially that towards the north.
Yet neither the dangers I was exposed to
from wild beasts; nor the toil of coursing
in woods, which are rendered almost
inaccessible by thorns; nor the sultry
heats of the east wind, that obliged
me every instant to have recourse to the
river waters, in order to quench my vio-
lent thirst; none of all these inconve-
niences deterred me; nothing was capa-
ble

ble of cooling my courage. I had an amazing good state of health; and this bore me up in the midst of so many perils and toils, under which a great many would have sunk.

1749.
November.

The seventh of November there happened to me an adventure, far more critical and more terrifying than any I had hitherto met with. I used alternately to walk on either bank of the river, but that day I happened to be on the north-side. I walked and coursed in a desert country, that had never been cultivated, over-run with wood, as ancient as the country itself, and the thickness of which, independently of the wild beasts that lurk there, ought naturally to have filled me with horror. In spite of the dangers and inconveniences inseparable from this kind of sport, my curiosity led me into the thickest parts of the wood, invited by the animals, plants, and birds, of which there was prodigious plenty. The negroe, whom I had taken

7.
Critical
adventure.

1749. ken with me as a companion, followed
November. me at a great distance. It was now
 noon-day, and I had scarce loaded my
 piece, after killing two *toucans*, when I
 beheld a tiger at a little distance. He
 had not as yet espied me, for there was
 a tree between us; but he walked with
 a very slow pace, his head inclining
 towards the ground. Instantly I clapped
 a ball into my piece, in order to
 take aim of him behind the tree, and
 in my left hand I held a hanger. Hearing
 these motions, the tiger turned
 quickly towards where I was, and darted
 his angry eyes at me. Though I
 was not twelve feet distant from him,
 still I thought it imprudent to fire,
 because I was alone, and should have
 run a very great risk, if I did not lay
 him dead upon the spot. I therefore
 took the resolution, which seemed
 to me the most prudent on the like occasion:
 this was still to keep full aim at him,
 with one knee bent for greater security,
 and to beat the ground with the

the

He meets
 a tiger.

the other foot without appearing dismayed, in order to determine him to

1749.

November.

purfue his way. This he did in an instant ; and taking fuch a leap, as I never beheld in my life, he freed me from the uneafinefs, into which his difagreeable prefence had thrown me.

That very instant I quitted the wood, to draw near the river-side, where my negroe did not come to me till an hour after. We waited a long time for the vefsel without hearing any tidings of it : we likewise went on a little further ; but all to no purpofe. We had left it above two leagues behind us, and there was no probability of its arrival before fun-fet. It was four o'clock in the afternoon ; and from fix in the morning that I had been toiling, I had tafted nothing but water, of which I had drank a great quantity, to temper the heats, I felt from the fcorching rays of the fun. Being now oppreffed with hunger, as well as my negroe, I determined

1749. mined to dine after the savage fashion.
September. All the requisites were at hand. I had killed in my walks more game than four hungry men could devour at one meal. My negroe was not embarrassed to roast it: he rubbed two sticks together, which took fire in an instant; then he made a wooden spit, and garnished it with a *toucan*, two partridges, and two Guinea-hens. As soon as I had dined, which I may be said to have done with more frugality and less ceremony than the negroes themselves; I thought I could do no greater service to myself, and to every Frenchman that should happen hereafter to walk in this dangerous neighbourhood, than to set fire to the wood, in the manner practised by the negroes. During the space of two hours that I staid there, I threw in fuel sufficient to spread the conflagration, for several leagues through this vast desert, which extends from the village called *Ndounnmangas* as far as Podor, for a space of above twenty leagues;

The author dines in the middle of a wood.

He sets fire to it, as he retires.

leagues ; it is frequented but very rarely by the Moors, who encamp in some places, which they previously set on fire. At seven in the evening, the long wished-for vessel arrived ; when I went on board with great satisfaction, by the blaze of the bonfire : eight days afterwards I heard, that it was still burning, and had laid the country open for several leagues.

1749.
November.

The eighth we arrived at Lamnai, a small island, which very justly might be called the island of birds : it lies very low, and is not two hundred fathoms in length. The trees were covered with such a prodigious number of cormorants and herons of every kind, that the *lap-tots*, in going up a rivulet, filled a boat, in less than half an hour, as well with the young ones, which they took either with their hands, or knocked down with sticks ; as with the old ones, of which

L

every

Prodigious
number of
birds on
the island
of Lamnai.

1749. every shot brought down several do-
 November. zens.

Stratiote,
 a plant of
 the Nile.

In this island I found a plant, which I had not yet seen; it is well known by the name of the *stratiote* of Egypt, that surprizing plant, which is said to move on the waters of the Nile, seeking for nutrition in the same manner as animals. Surely this is a made story, or perhaps the loose descriptions which travellers have given of it, have been interpreted in a wrong sense. The *stratiote* of the Niger is the same as that of the Nile, of which we have a figure in *Prosper Alpinus* *, and in the garden of Malabar †: and its roots are so deeply fixed in the earth, that it is with difficulty they can be plucked up. What has given rise to

* Hay alem el maovi, id est, stratiotes. *Prosp. Alp. Ægypt. v. 2. p. 51.*

† Kadda-pail. *Hort. Mal. vol. 11. p. 32. tab. 63.*

this

this error is, that the abovementioned 1749.
plant produces small tufts of leaves, at a November.
very great distance from each other,
and supported by a stem, which, after
floating on the water, loses itself insen-
sibly in the earth; much in the same
manner as the *potamogetons*, the *nym-*
phoides, and even the leaves of the *ne-*
nusar or water-lilly.

Being so near to Podor, which we descried from afar, over the low lands, I began the more ardently to wish for the happy hour of landing, as the vessel hardly advanced above three or four leagues a day. At length this hour came the tenth of November; and the nineteenth day put a period to this tedious and laborious voyage; which I had performed in the hottest month of the year. The thermometer could not be exposed with any safety, except in the ship's cabin; where it

10.
He arrives at Podor.

Excessive heat on board the vessel.

L 2 marked

1749. marked by twelve at noon from 40. to
November. 45 degrees. This cabbin was so greatly warmed by the sun, that even in the night-time it still preserved from 30 to 32 degrees of heat: it was like a stove, or rather a fiery furnace: the pitch and tar were melted to such a degree, as to pass through all the joints of the vessel. In short, the heat I endured in this voyage, was such, that I do not think it can possibly be more violent in any other part of the world: hence I am not at all surprized, that most of the French, who are near two months in performing the voyage of Galam * in July and August, should seldom get there without being seized with burning fevers. And therefore it is that those, whom experience or a thorough knowledge of the country has rendered more prudent, do not fail to embark in the month of June, as soon as the waters are high

* Galem is upwards of 700 miles above the mouth of the River, and the principal place of trade for gold, slaves, &c.

enough. Then they have a great deal less to suffer from the intemperateness of the rainy season, and of the heats, which increase daily from the month of June to November; so that they would never be able to bear them, were they to set out in September or October.

1749.
November.

Another inconveniency of the voyage to Podor or Galam, in the month of October, is owing to the musketoes and bees. I have elsewhere mentioned how troublesome the former are: but the latter are still more so. Every day towards twelve o'clock, I was sure of being visited by one, two, and sometimes more swarms, which made their entrance into the cabin, attracted, in all probability, by the penetrating and refinous smell of the pitch and tar. Such tormenting visitors obliged me to quit the vessel, and to seek for peace on shore.

Bees very
trouble-
some.

The same thing happened to me at Podor in November and December. It

1749. is very likely, that during those three
November. months the swarms quit their old hives
to build new ones : for, at that time,
you frequently meet with very considera-
ble heaps of them. One day I saw the
roof of a house, the surface of which
was sixteen square feet, covered with a
lay or bed, four fingers thick of bees,
heaped up in this manner. This is an
evident proof of the prodigious number
of those insects. They lodge every where,
but more particularly in the trunks of trees
made hollow by time. This year they had
three hives at our settlement of Podor :
one between the shutters and the win-
dow of the room on the first floor : the
other on the ground floor, in a small press
full of old iron, a leaf of which was
opened every day ; and it stood at the
bottom of a very dark warehouse : the
third was in the ceiling of another
warehouse, just behind the door. With
difficulty could we drive away those
insects, even in the night, and with
the help of fire : they know how to di-

distinguish in the dark, those who molest them, and they shew their revenge by most pungent stings.

1749.

November.

These bees differ from those of Europe only in size. There is this singularity in their honey, that it never acquires a consistency like ours; but is always liquid and like a brown syrup. We may affirm, it is infinitely superior, both in delicacy and taste, to the best honey collected in the southern parts of France.

Quality of
their honey.

The country about Podor had now a very different face from what it wore at the time of my first voyage. Instead of a dry barren plain, I beheld an agreeable champagne, intersected with morasses, where rice grew naturally without being sown. The higher grounds were covered with millet: and there also the indigo and cotton plants displayed a most lovely verdure. Almost all the aquatic plants of warm climates, passed in review before me: I ob-

Plants of
Podor.

1749. served the *water lilly* *, two sorts of *pon-*
November *tederia* †, the *jussiaea's* ‡, the *lemmas*
 and the *pongati* ||, of the garden of Ma-
 labar. I likewise met with several spe-
 cies of *alisma*, *bindweed*, *nenuubar*, *utricu-*
laire, *hottonia* ¶, *adhatoda*, besides a great
 multitude of cyperuses, or galingales, and
 other, mostly unknown, plants.

My curiosity was not confined to the
 adjacent fields ; it extended also to the
 woods and *marigots* two leagues all round.
 There I found many new species of
 trees and birds of exquisite beauty.
 But of all the extraordinary things I
 observed, nothing struck me more than
 certain eminencies, which, by their
 height and regularity, made me take them

* *Nymphæa Indica minor lævis.* *Rumph. Herb.*
Amb. v. 6. p. 167. tab. 72. fig 3.

† *Pontederia floribus umbellatis.* *Lin. fl. Zeyl. 129.*

‡ New species.

|| *Pongati.* *Hort. Maleb. v. 11. p. 47. tab. 24.*

¶ *Hottonia flore solitario, ex foliorum alis prove-*
niente. *Burm. Th. Zeyl. pag. 121. tab. 55. fig. 1.*

at a distance, for an assemblage of Negroes huts, or a considerable village: 1749.
November.

and yet they were only the nests of certain insects. They are round pyramids, from eight to ten feet high, upon nearly the same base, with a smooth surface, of rich clay, excessively hard and well built. The inside is a labyrinth of little galleries, interwoven one with the other, and answering to a small opening, which gives ingress and regress to the insects that inhabit it. They are called *vag-vagues*: and perhaps are the same as those which go by the name of wood-lice and white ants in America and the East-Indies. They are shaped like the common ants; but their members are not so distinct. Their body, besides being of a dirty white, is also much softer, fuller, and as it were, of an unctuous nature. These creatures multiply prodigiously; and when they want to make a lodgment, they attack some dead trunk of a tree, into which they quickly eat their way.

In

1749.

November.

Observa-
tion on
the latitude
of Podor.

In my two voyages I had carefully drawn a plan of the river Niger, from its mouth to Podor: so that there remained only for me, to know the latitude of this place. The difference I found between my plan, and that of the ancient and modern charts, made me suspect that the latitude had not been rightly determined; if it be true that they worked upon it at all. In order to be certain, I fixed, with the requisite precautions, a gnomon eight feet one inch and a line in height, upon a platform, reduced to a very exact level. During the month of November and part of December, I observed thereon different points of the sun's shadow, which by calculation gave me its height. Thence I concluded Podor to be 16 degrees $44\frac{1}{2}$ minutes north latitude, according to the account I transmitted at that time to M. Le Monnier, who was pleased to communicate it to
the

the academy of sciences *. This obser- 1749.
 vation is of some importance, since it November.
 corrects an error of above 15 minutes,
 by which all other maps place Podor too
 far north ; and it greatly diminishes the
 length of this river, whose direction has
 been also wrong laid down by most geo-
 graphers. Thus, besides the advantage
 I reaped from my second voyage to Po-
 dor, in informing myself of the natural
 history of the country; it likewise ena-
 bled me to verify and correct an essential
 point of geography, with regard to the
 course of the Niger, of which we know
 but a very small part as yet.

In sailing down this river, the winds
 were as favourable to us as they had been
 adverse in ascending. I left Podor the
 17th of December, and arrived the 21st
 at the island of Senegal ; so that I was

17.

He returns
 from Po-
 dor to the
 island of
 Senegal.

* This observation was printed in the second
 volume of the memoirs presented to the academy by
 divers learned men, pag. 605,

1749. only five days in my return, whereas I
November. had been nineteen in going to Podor.
 As the waters decreased, they left on the
 banks of the river a slime, which the
 Negroes know how to make the most of;
 for they had sown every part of it with
 large millet, tobacco and several sorts of
 French beans.

1750. I did not stay long upon the island of
 11 January. Senegal; for I left it the 11th of January
 Second the ensuing year, to return a second time
 voyage to the island of Goree, where I arrived
 Goree. the 15th. From thence I was to make
 the voyage of Gambia, with Mess. de la
 Brue and de Saint Jean; one the director
 of the settlement of Senegal, the other of
 the isle of Goree. They were going to
 restore the French factory of Albreda,
 situate upon this river, within six or
 seven leagues of its mouth, and about
 fifty from the isle of Goree. Three
 vessels set sail together the 10th of Fe-
 10th of bbruary, and entered the river Gambia
 Voyage to February. the 20th. Its mouth does not begin,
 pro-

properly speaking, till you are at the point of the bar; though its bed ad-

1750.

February.

vances a good way into the sea, by means of the sand banks or flats betwixt the island of birds and cape St. Mary. The cape is a high land, which you leave upon your right. From the point of the bar to the factory of Albreda, the river has a very unequal breadth; in some places it is a league over, and a little more in others. Its banks are very high, and bordered on both sides with tall trees, which plainly shew the goodness of the soil.

We cast anchor over against the factory, and staid a few days in the road, without going ashore. There we lived very well: the negroes brought us plenty of excellent fish, as thornbacks, soles, monstrous large rock fish and a great many *tree-oysters* *, which abound in that river.

They anchored over against the factory of Albreda.

Fish of the river Gambia.

* See the natural history of bivalvovs shells. *Species* I. *oysters*, plate 14. fig. 1.

Here

1750. Here they have every thing requisite for
February. their sustenance. The banks of the river being lined with mangroves, they fasten to the roots thereof: and the sea water never loseth its saltness in this spot. What is very extraordinary, every where else, oysters are loosened from rocks; here they are gathered upon trees! At low water, they are left bare, and seen hanging at their roots. This is what made some voyagers, who had seen the like in America, affirm, that they perched upon trees. The Negroes have not so much difficulty as one would imagine, in gathering them; they need only to cut off the branch, to which the oysters are fastened. A single root bears sometimes upwards of two hundred; and if it has several branches, it forms a cluster which one man would find difficult to carry. The shells of these oysters differ from those of Europe, being longer, narrower and thinner; but, as to the delicacy and relish of the meat, connoisseurs know no difference.

1750.

February.Cloud of
locusts.

In this voyage I was witness myself, for the first time, to the mischief done by locusts, that scourge, so dreadful to hot climates. The third day after our arrival we were still in the road; when there suddenly arose over our heads, towards eight o'clock in the morning, a thick cloud, which darkened the air and deprived us of the rays of the sun. Every body was surprized at so sudden a change in the sky, which is seldom overcast in this season: but we soon found that it was owing to a cloud of locusts, raised about twenty or thirty fathoms from the ground, and covering an extent of several leagues, upon which it poured a shower of those insects, which fell to devouring while they rested themselves, and then resumed their flight. This cloud was brought by a very strong east wind; it was all the morning in passing over the adjacent country; and we imagined that the same wind

1750. wind drove the locusts into the sea. They
February. spread desolation wherever they came:
after devouring the herbage, with the
fruits and leaves of trees, they attacked
even the buds and the very bark: they
did not so much as spare the reeds,
with which the huts were thatched,
notwithstanding that these were so
dry: in short, they did all the mis-
chief that can be dreaded from so vo-
racious an insect. I took a great
number of them, which are still to
be seen in my cabinet: they were in-
tirely brown, of the breadth and
length of one's finger, and armed with
two strong jaw bones, dented like a
saw. Their wings were much longer
than those of any locusts I had ever seen
before: and no doubt, but it was owing
to the largeness of those wings, that
they

they could fly with such ease, and poise themselves in the air.

1750.
Feb.

One would not imagine that so shocking an insect, as the locust, should ever be food for man. And yet it is an undoubted fact, that in several parts this country, the people eat of it: nay they have different ways of dressing this extraordinary dish. Some pound them, and boil them with milk; others only broil them on the coals, and think them excellent food. There is no disputing of tastes: for my part I should willingly resign whole clouds of locusts to the Negroes of Gambia, for the meanest of their fishes.

People
who eat
locusts.

One thing which always surprized me, is the prodigious rapidity, with which the sap of trees repairs any loss they may happen to sustain in that country: and I was never more astonished, than when, upon landing four days after that terrible invasion

Activity of
the sap in
plants.

M

of

1750. of locusts, I saw the trees covered with
 Feb. new leaves ; and they did not seem
 to me to have suffered much. The
 herbs bore marks of the devastation
 somewhat longer ; but a few days
 were sufficient to repair all the mis-
 chief.

Nation of
 Mandin-
 goes.

The people inhabiting the country
 along the Gambia, are Mandingoes
 or Sofes, to express myself in their
 way. Their manner of life, and dress,
 is not preferable to that of the other
 blacks; but their huts are better built :
 and perhaps they are are obliged for
 their taste of architecture to the Por-
 tuguese, who were formerly settled in
 those parts. The walls are made of a
 fat binding clay, which soon hardens.
 They are all thatched with straw, which
 hangs down to another little wall breast-
 high; and this makes a small gallery
 round the hut, where they are shelter-
 ed from the rays of the sun. The
 village

village having taken fire a little after my arrival, the walls of those huts that withstood it, were partly of a beautiful red, and partly vitrified by the violence of the fire: at a distance they seemed to be done over with a very bright enamel.

1750.
Feb.

The hut where I lodged was large and commodious, but as dark as a subterraneous cavern, even at noon-day, because it had no other opening but a door pierced at each end. Here I must observe, lest I should forget it, that a great number of our European swallows resorted hither every evening, and passed the night upon the rafters; for, as I have elsewhere mentioned, they do not build nests in this country, but only come to spend the winter.

European
Swallows

As my view in going up the Gambia was to make experiments in natural history, I wanted a lightsome place to perform my operations: and the huts

1750. throughout the village were all too dark.
 Feb.

I contrived therefore to make use of a tamarind-tree in the middle of the garden, which belonged to my hut, and was planted with fine orange, citron, papaws, and other fruit-trees. I made an inclosure of straw under its verdant foliage, which, besides affording me a cool retreat, invited the feathered choristers to warble

Cabinet of
 Observati-
 ons.

out their notes. In short, it was a real cabinet of natural philosophy, and I question whether so rural a one was ever seen before. For my part, the memory thereof is still dear to me, because of the knowledge I thereby acquired of an infinite multitude of new and curious plants, the growth of this country, which is doubtless one of the finest spots of all Africa.

Fertility of
 the coun-
 try.

The soil is rich and deep, and amazingly fertile: it produces spontaneously and almost without cultivation, all the necessaries of life, as grain, fruits, legumes, and roots.

On

On the high and somewhat drier grounds you see guavas, acajous, two sorts of papaws, 1750.
Feb.

with orange and citron trees of exquisite beauty: I measured some myself that were above five and twenty feet high, and a foot and a half the diameter of the trunk. The roots of manioc, igraine, and batatee multiply greatly in open places. The black and moist clays are taken up with forests of banana's, at the feet of which both pepper and ginger grow. Every thing matures to perfection, and is excellent in its kind. They likewise make a great deal of date wine, which is very delicious.

The pepper of this place is not the ^{Pepper.} same as that of India. It is a round berry about the bigness of hemp-feed, which ripens to a red colour, and has a sweetish taste. It contains a seed of the shape and bigness of a grain of cabbage, but very hard, and in taste like aromatic pepper, which has an agreeable poignancy. This fruit grows in small bunches on a shrub.

1750. three or four feet high, whose thin supple
 Feb. branches are furnished with oval leaves,
 pointed at the ends, very greasy, and
 pretty much like those of the privet or
 prime print.

Culture of
 rice.

Rice is almost the only grain sown
 at Gambia in the lands overflown by
 the rains of the high season. The negroes
 cut all these lands with small causeys,
 which with-hold the waters in such a man-
 ner, that their rice is always moistened.
 They had got in their crop long before
 my arrival; so that the rice fields in the
 month of February were a sort of drained
 morasses, on which grew a few wild herbs.

Shining
 flies.

Every night we saw shining flies, which
 flew on all sides; and, wherever they pas-
 sed, they diffused a light similar to that
 of twinkling stars. I walked there sever-
 al times at night fall, and perceived that
 they came out of crevices or gaps formed
 in that marshy soil when dried by the
 sun, and in which they had made their
 nests,

nefts. I observed alfo, that thofe which had wings, emitted light as well as thofe which had none; contrary to what we fee in France, where the former have not this advantage. In fhort, they flew about only for three or four hours at the moft, after which they returned to their holes. I gathered a great number of them, which I kept for fome days in fmall phials, where they gave a light fo long as they lived; but it grew dim in proportion as the infect drew towards its end. This little creature is improperly called a glow-worm or fire-fly; fince it is neither a worm nor fly; but a fmall beetle, of a brown colour, and its body flat and fcaly, like that of other beetles. Its wings are covered with two cafes, alfo fcaly, tho' very foft. The light with which it is furnifhed, is lodged only in the three laft rings of its body; and fome motion muft be impreffed on them, for the light to fhew itfelf outwardly.

1750.
Feb.

1750.
Feb.Wood of
Gambia.

Leaving the river, we found a rich foil, of red sand, extremely fine, and unconceivably fruitful : this appears by the trees with which it is covered. Here you see thickets impenetrable, not because of the thorns, for there are very few ; but by reason the trees stand so close : among the rest I met with some wild vines, not unlike the European. There you behold a forest of lofty trees, bending under the weight of the *cissus's* (1), which would be called ivy in America, from the manner in which they fasten themselves, ascending and descending, intertwined with each other, and seeming to bend downwards and to submit their branches, just like the tackling of a ship in regard to its yards and masts. It was in these fine fields I beheld those trees of such prodigious di-

(1) *Cereo affinis scandens planta aphylla ; caule rotundo, articulato, glabro, succulento, saturatè viridi. Sloan. Jam. Vel. ii. tab. 224. fig. 3 & 4.*
mensi-

menfions, viz. father Plumier's *ceyba's* 1550.
 (2), which, as I have elfewhere ob- Feb.
 ferved, the negroes of Senegal call *benten*.

The *benten* furpaffes all the trees of Senegal in height, as the calabafh-tree furpaffes them in thicknefs. There are some a hundred and ten, and even a hundred and twenty feet high, the trunk of which is from eight to ten feet at the moft in diameter, and extremely erect; between the root and branches, it is fifty or fixty feet, and oftentimes more, in length. The chamferings or kind of small wings, which fometimes grow the whole length of the trunk, do not in the leaft diminifh the beauty of its white bark, nor the boldnefs with which it carries its round fpreading top. It is of this tree the negroes make their *pirogues*, by hollowing its trunk; the wood being very foft,

Benten a tree of a prodigious height.

Pirogues made of it.

(2) *Ceyba viticis folio caudice glabro. Plum. Gen. pag. 42.*

dense,

1750. dense, and extremely light. Those who
Feb. inhabit the banks of the Gambia being
possessed of the largest *bentens*, make
likewise the largest *pirogues*: they have
some from forty to fifty feet long, and
from four to five feet in breadth, and
somewhat less in depth.

Farobier.

The *farobier* is another large tree also
as common as the *benten*, but of quite a
different use, because of the hardness and
weight of the wood. The negroes are
very fond of its fruit, which is a kind of
cod or husk like that of a French bean,
but above a foot in length, contain-
ing a black flat seed, like large lentils,
enveloped in a yellow farinaceous sub-
stance. This fruit frequently serves
them instead of every other sustenance,
especially when they travel: it is ex-
tremely good, and nourishing; and
tastes much like the best ginger-bread
cake.

1750.
Feb.

At the east end of the village of Al-
 breda, I saw a wild fig-tree of an ex-
 traordinary shape and size. It was not
 very high; but its trunk was about
 ten feet diameter, and cut with so ma-
 ny chamferings, that it seemed to be
 composed of several trees, whose trunks
 joined to each other, most of them
 spreading chiefly more towards the roots,
 where they formed a kind of buttress.
 This trunk was not above fifteen feet
 high, but it was divided into several
 large branches, well covered with leaves,
 which made it very agreeable, as it af-
 forded a most refreshing shade. The
 inhabitants had pitched upon this spot
 to build a *caldé*, that is, a public hall.
 This consisted of a floor raised two or
 three feet above the earth, and composed
 of several forked shoots planted near to
 one another, over which cross shoots were
 laid. The whole was covered with hur-
 dles put close together, and some mats
 over

Extraordi-
nary fig-
tree.What a
caldé is.

1750. over them. This was the place where
Feb. their assemblies were held: here the lazy and the indolent met to smoke and converse; here the news-mongers sat loitering; in a word, here they transacted all the affairs and concerns of the village.

Frogs.

It is not at all surprizing that in a moist country there should be plenty of frogs: but surely I had great reason to be surprised, not having met as yet with any in all my excursions. From Podor to Gambia, which, including the isle of Senegal, and that of Goree, with Portudal and several other places where I had been, contains a space of a hundred and fifty leagues, and a country that I was well acquainted with, I had as yet seen none but toads. It was in a well, which had been dug at the west end of the village of Albreda, that I discovered the first frogs: and these could not get away from thence, the
borders

borders being raised six feet, and cut ^{1750.}
vertically. I saw none except in Feb.
this well, which contained such a prodigious multitude of them, that, when they rose above the water, they absolutely hid the whole surface of it, covering one another over again, nearly in the same manner as tiles are laid on the tops of houses. Their bodies were smaller, but more compact than those of our European frogs; their colour was green, agreeably variegated with black spots; so that I looked upon them as a very particular species.

Botany, and every other branch of natural history, had greatly improved under my care in this fruitful country; and I should have considerably added to my store of observations, if I had been permitted to continue there for any time: but the circumstances, and difficulties attending a new settlement, prevented my tarrying

1750. rying any longer. I therefore set out
 March.

12th of
 March.

He returns
 from Gam-
 bia to the
 isle of Go-
 ree.

on the 12th of March upon my return
 to Goree, along with the directors of that
 island, and of Senegal, who had taken
 care that I should want for nothing
 while I was at Gambia.

Prodigious
 whales:

Our passage was tedious, so that we had
 full leisure to take a very near view
 of two whales, which we had seen al-
 ready in our first voyage. They fol-
 lowed us a great deal longer in this, and
 we had the pleasure of seeing the sports
 and majestic movements of those mon-
 strous animals, which amused us with
 their company, only when they did not
 come too near our vessel. I reckoned their
 length to have been about a hundred
 and fifty-five or sixty feet: the part of
 their back which they held always a-
 bove water, was twelve feet long, and
 from four to five broad, without reck-
 oning the head, which it raised some-
 times for respiration, but made no more
 noise

noise than a horse, that puffs and blows when he is drinking. They did not throw water out of their nostrils, after the manner of all blowing whales, which are also very common in the tropic seas: in short, I saw no appearance of fins on their back. No doubt but a vertebre of fourteen inches diameter and eight high, which I had occasion to see afterwards on the sea shore, with some ribs upwards of ten feet in length, must have formerly belonged to this species of whale. Some perhaps will be surprized that I should take notice of these animals, when I have nothing more particular to say about them: yet as they are to be found in latitudes where the negroes are neither desirous nor accustomed to fish for them; and as there is no probability that there ever will be any seen nearer, or more conveniently than these were beheld by me; I thought it my duty to communicate the present remarks, in order to shew
how

1750.

March.

1750. how large the whales of the torrid zone
 March. — are, supposing them to be a distinct sort
 from those of the northern climates.

Sea ex-
 tremely lu-
 minous.

By day we were diverted with the whales, and by night with the lustre of the sea. As soon as the sun dipped beneath the horizon, and night overspread the earth with darkness, the sea lent us its friendly light. While the prow of our vessel ploughed the foaming surges, it seemed to set them all on fire: thus we sailed in a luminous inclosure, which surrounded us like a large circle of rays, from whence darted in the wake of the ship a long stream of light, which followed us to the isle of Goree, where we landed the twenty-third of the same month.

The 23d
 he arrives
 at the
 island of
 Goree.

Instead of returning directly to the island of Senegal, I resolved to stay at Goree, in order to complete the observations on plants, and particularly on shells

Shells and other sea bodies, which had 1750.
escaped me in my two former voyages.

March.

It was then the fish season, at least, for fish of a moderate size. The sea seemed to be full of the latter: when they happened to be pursued by the large ones, you might see them in shoals approaching towards land; and oftentimes they ran ashore. Some of those shoals were fifty fathoms square, and the fishes crowded together in such a manner, as to roll upon one another, without being able to swim. As soon as the negroes perceive them coming towards land, they jump into the water, with a basket in one hand to catch the fish, and swim with the other. It is curious to behold them in this uneasy attitude, penetrating through the finny swarm; they need only to plunge and to lift up their baskets, and they are sure to return loaded with fish.

Shoals of fish.

1750.

March.

Extraordi-
nary fish-
ing.

I was present at a very extraordinary capture of fish made the same month, on the coast of Ben, within a league of the island of Goree, by the company belonging to one of the French East-India ships, which had anchored in the road. They had only a net of about sixty fathoms, which they threw at a venture into the sea ; for they were not so lucky as to espy any of those shoals of fishes: yet they had such surprising success, that the shore was covered, the whole length of the net, with the fish they caught, though the net was in a bad condition. I reckoned part of them, and judged, that they might in all be upwards of six thousand, the least of them as large as a fine carp. There you might see pilchards, rock-fish, mullets or gull-fish of different sorts ; mole-bats, with other fishes very little known. The negroes of the neighbouring village took each their load, and the ship's crew filled their boat till it was ready.

dy to sink, leaving the rest on the sea-shore. In any other country, such a capture of fish would, without all doubt, pass for a miracle.

1750.

March.

I have already observed that, in the island of Goree, there is a low land called Savana. There I lodged in a hut of straw, built in the negroe manner: it was new when I went into it; but in less than a month you might see through it. I inquired into the cause of this, which I found to be as follows. The earth hereabouts was all filled with a species of white ant, called *vag-vague*, different from that which I have elsewhere described. This, here, instead of raising pyramids, continues buried under ground, and never makes itself known but by small cylindrical galleries, of the thickness of a goose quill, which it erects against the several bodies it designs to attack. These galleries are formed of earth with infinite delicacy of workmanship. The *vag-*

A very
trouble-
some in-
sect, called
vag-vague.

1750.

March.

vagues make use of them, as of covert-ways, to work without being seen: and whatever they fasten themselves to, whether it be leather, cloth, linnen, books or wood, it is surely gnawed and consumed. I should have thought myself pretty well off, had they only attacked the reeds of my hut; but they pierced through a trunk which stood on trestles a foot above the ground, and gnawed most of my books. Even my bed was not spared, and tho' I took care every evening to beat down the galleries, yet they were frequently erected again, in the middle of the night, up to my bolster; and the *vag-vagues* got into the bed, where, after cutting the linnen and mattresses, they came to my flesh and bit me most cruelly. I shall be excused from mentioning the swellings and acute pains which followed. Their size is hardly bigger than that of our large European ants; yet they
are

1750.
March.

are of such a constitution, that neither soft nor salt water, nor vinegar, nor any other strong liquors, with which I often covered the floor of my chamber, were able to destroy them; so that every method I took to extirpate the breed proved ineffectual. The infinite havock which these insects make, has set people upon thinking of different contrivances to exterminate them. Among others, arsenic has been proposed as an infallible remedy; but it would not be prudent to advise and much less to practise it. If fire was not apt to cause greater mischief than that arising from the *vag-vagues*, it would be a cheaper and more effectual remedy; for we seldom see those insects, in places that have undergone this operation.

Tho' I suffered greatly from the hostilities of the *vag-vagues*, yet I must confess, they contributed to a con-

Observations on the light of the sea.

1750.

March.

considerable number of observations; and were the cause of a frequent repetition of experiments, which perhaps I should otherwise have performed but very seldom. My room was full of pails of sea water, where I constantly kept live fish, which in the night time emitted a light, not unlike that of phosphorus. The mugs full of shells, and even the fish that lay dead on the table, gave the same light. All these illuminations put together, and reflected upon different parts of the room, made it appear as if it was on fire; and I must own, that I was of that opinion the first time I saw this strange phænomenon: for it made the impression on me, which it is natural for every man to feel in the like case. The *vag-vagues*, by awaking me suddenly out of my sleep, renewed my fright, much oftener than I could have wished in the beginning: but my apprehension gradually ceased, by seeing the thing often repeated; till I at length received a pleasure

sure from this extraordinary sight. What was most engaging, each fish shewed itself plainly to the eye, by the light emitted from its body; and the same effect was produced by the shells and other sea bodies which I had with me; even the pails themselves looked like a burning surface. This was not all: every day the sight was new, because I had new fishes and new shells to observe: now it was a pilchard, now a molebat: one time a purple fish, another time a periwinkle: one time a polypus, a crab, or a star-fish, that shewed its luminous rays in the dark: in short, I perfectly distinguished the shape of all those different fishes, by rays of light, which darted from every part of their bodies; and, as I could place them in a thousand different positions, I had it in my power, to give an infinite variety to this beautiful illumination.

1750.

March.

Luminous
fishes.

1750.
March.

When the *vag-vagues* obliged me to quit this glittering mansion, and to look for relief abroad, the angry ocean presented me with the same phænomenon in great. The foaming billows seemed to metamorphose themselves into mountains of fire, and exhibited to my view a most amazing spectacle, more capable of exciting admiration than fear, even in the minds of persons exposed to their fury.

Extraordi-
nary acci-
dent.

Notwithstanding the sea about the island of Goree was most violently agitated at this time, in consequence of the vernal equinox, yet I crossed it very often in a small boat, in going over to the continent. One day I was bound for Cape Bernard, I had like to have lost my life. This cape is not above the third part of a league from Goree; and this was the first time I thought of landing there. At a distance

tance it seemed to me, as if it formed a creek, somewhat like a small

1750.

March.

haven; and I made no doubt, but I should be able to get on shore with all ease: but the nearer I drew, the more difficult I found it; for the surf ran so high, that I could see no safe place to land. During this uncertainty, the waves were driving us towards shore; when all of a sudden I saw myself environed by a huge surge, which threw the boat upon a rock where it overfet! Luckily I did not lose my presence of mind, notwithstanding this disaster; and, as the boat overfet, it stuck to the rock, where it was supported like an arch, under which my two negroes made their escape. I did not wait for another wave to come and set it right again, and perhaps to overwhelm me, which would have inevitably happened: but I made use of my legs, to get to the further end of the beach, where I walked

in

1750. in the fun to dry myself, and that was
^{March.}
all the harm I suffered.

Hitherto no difficulty had been able to stop me in my carrier; yet this accident, together with the sea-sickness with which I was always afflicted, occasioned me to make very serious reflections, on the risks I underwent, in crossing every day from Goree to the continent, on board so small a vessel. M. de Saint Jean, director of the island, having the greatest regard for me, and even more than I had for myself, was desirous to prevent the trouble and danger to which I exposed myself daily: for which reason he proposed to the master of Ben, a small village on the continent, within a league north of Goree, to entertain me at his house, and to procure me all necessary safeguards in walking over his lands, or in any other excursion I should chuse to make.

make. This negro lord, having a very high affection for the French nation, was

1750.
April.

overjoyed at the opportunity of entertaining a native of that country for some

months. The 24th of April, upon ar-

24 April.

riving at the village, I found a very con-

The au-
thor goes
and resides
in the vil-
lage of Ben
among the
negroes.

venient hut, which he had lately built

for his own use. It was surrounded

by several courts and gardens, where

he had likewise got a small but light

closet for me, in such a situation as

I had desired on account of my ob-

servations. Nothing could be more con-

ducive to my purpose, than the advan-

tageous situation of the village. On

the one side, the sea furnished me with

every thing I could wish in regard to

fishes and shells; and on the other I

had plains, a considerable forest, and, two

leagues further, the mountains of Cape

Verd. Here I had an ample field for

my curiosity, as well concerning plants, as

every species of animals.

This

1750.
April.

Monstreous
calabash
trees.

This is quite a sandy country like the neighbourhood of Senegal; but it forms a more rising ground. Besides the same plants, it produces a great number of others particular to itself; and a vast many acaciæ and calabash trees. Going from Ben to Cape Verd, I met upon the road, about half way, with two of the latter still larger than those I had admired in the neighbourhood of the island of Senegal. I measured their trunks with a packthread, and found the one to be seventy-four feet, and the other seventy-seven in circumference, that is, upwards of five and twenty feet diameter. These were the thickest I ever saw of the kind: and as Africa may boast of producing the largest of animals, viz. the ostrich and the elephant; so it may be said, not to degenerate with regard to vegetables, since it gives birth to calabash trees, which are immensely larger than any other tree now existing, at least

least that we know of; and probably
the largest on the terrestrial globe.

1750.

April.

I saw on the branches of those trees some birds nests, so vastly capacious as to surprize me as much as the trees themselves! They were at least three feet long, and resembled oval baskets, open below, and confusedly interwoven with very large twigs. I had not the pleasure of seeing the birds that built them; but the people of the village assured me, they had pretty much the figure of that kind of eagle which they call *ntann*. To judge of the size of those birds by their nests, they cannot be much inferior to an ostrich.

Nests of an
extraordi-
nary size.

The double mountain of Cape Verd was the only land-mark I had, to steer my course thro' this vast plain; for the sands were tossed so impetuously from one place to another by the winds, that it was

Country in
the neigh-
bourhood
of Cape
Verd.

im-

1750. impossible to distinguish any path or trace
 April.

whatever: and even the eminences, which I met now and then, served only to bewilder me and my negroes, by being so uniform. The only verdure they had upon them, was some shrubs known in India by the name of *bois de renette* *. Sometimes I walked through spacious fields, naturally sown with a kind of herb basil, peculiar to the country. But what seemed worthy of observation to me, was, wherever it grew, it was very thick; and that very rarely any other plants whatever could be seen there, not even on those spots that were thinnest sown; as if the proximity thereof was hurtful to them. This herb basil is ligneous and lively: it forms a shrub two feet high, whose stem and leaves are of a reddish green, and diffuse a citron fragancy, extremely pleasing. The sands, tho' tost to and fro every instant, produced a great many other

* Dodonæa. *Linn. hort. Cliff.* 148. *Staphylo-*
dendrum foliis lauri angustis. Plum. cat. pag. 18.

plants,

plants, and especially dog-grafs, with which nearly their whole furface was covered. 1750.
April.

My most ufual walk was in the forest of Krampfane, which I likewise called the forest of palmetto trees, because indeed, there is hardly any other to be feen in that neighbourhood. It begins within half a league of the village of Ben, and extends two leagues north-eaft, making a femi-circle, and paffing within a quarter of a league of a ruinous village, called *Mabao*, fittuate on the fea-fhore within a league and a half of Ben. Its breadth is, throughout, nearly a quarter of a league. The foil is low, and in fome places hollow like a canal, and feems to have been, heretofore, either a bafon overflown by the ocean, or at leaft a falt-pan, which, in drying up, retained a black flimy fand, from whence the rain waters imbibe a faline tafte, that prevents their being drinkable. I would even venture

to

1550.

April.

to affirm that this canal was formerly a branch of the marigot of Kann, whose communication has, without all manner of doubt, been interrupted by a sand-bank, which the winds have thrown up near its mouth.

Date trees.

From the side towards Ben, as far as two thirds of its extent in length, this forest consists intirely of date trees, at the entrance of which there are small groves of oily palms: in the other part you see only the latter sort. The date tree of this country is wild, and grows without any culture. The Serera negroes of the kingdom of Kaïor, which includes Cape Verd, call it *Kionkomm*; and the natives of the country of Oualo, towards the island of Senegal, give it the name of *Sor-sor*. It seldom rises higher than from twenty to thirty feet: its trunk is round and upright, of a dun colour, and six inches at the most in diameter. From the top of it there issues forth a cluster of leaves from

from eight to nine feet in length, which 1750.

extend all round like a parasol, and bend April.

a little towards the earth. The bottom part produces an infinite number of stalks like that of the middle; but they seldom shoot so high as four or five feet. These stalks spread the tree very considerably, so that, wherever it naturally grows in forests, you find it difficult to open a passage through its prickly leaves. The fruit thereof is shorter than that of the other sort of date tree; but the pulp is much thicker. It has a sugary and agreeable taste, infinitely superior to the very best dates of the Levant; perhaps because it ripens better on the tree.

The oily palm * is of all others that which shoots to the greatest height. Here are some from sixty to eighty feet in the stalk, without

* Palma altissima, non spinosa, fructu pruni-formi minore, racemoso, sparso. *Sloan Jam. vol. ii. tab. 215.*

1550. any branches. The trunk is outwardly
April. black, equally large through the whole
 length of it, and from one to two feet in
 diameter. Its head is loaded with leaves
 pretty much like the date tree. It bears a
 round fruit the size of a small nut, and
 covered with a yellow pulp of which they
 make the palm oil. The negroes call it
tir.

Palm wine. It is from these two trees they extract
 the palm wine, which is exactly the co-
 lour of whey. There are several me-
 thods of extracting it: the first practised
 by the negroes, and which I have of-
 ten followed, after their example, in re-
 gard to the date tree of the forest of
 Krampfane, is this: They cut a stalk a
 few inches under the crown, and leave
 only some leaves standing: then they lay
 the leaves above the incision, and fasten
 them with a peg to the tree. The
 extremity of those leaves is folded af-
 terwards into a calabash, or into a small
 earthen

First me-
 thod of ex-
 tracting it.

earthen pot, narrow-mouthed, and suspended so as not to quit the leaves, or to fall. By this method the sap which issues from the stalk, distills along the leaves, and is collected together in the earthen pot.

1750.
April.

The second method of extracting the palm wine consists in making a round hole under the head of the tree, instead of cutting it; and in introducing into this hole a few folded leaves, which serve as a gutter or passage to convey the liquor into the pot or vessel fastened to it.

Second
method.

These two methods are easy to practise in regard to the date tree, as they only make an incision in the stalk, which is not above five feet high. But when they are obliged to extract the wine from a very tall tree, as from the oily palm, there is a great deal more difficulty in the operation. The negroes have an admirable way of doing it. They take a girth

1750. of the bark of *baubinia*, or of the leaves
 April.

----- of a palmetto tree, dried in the sun, beaten and twisted, the breadth of thrice the thickness of one's finger. At one end they make an oilet-hole, into which they put a little stick fastened across the other end, to serve as a button. This girth must be neither too pliant nor too stiff, but should have a sufficient elasticity to hinder it from giving way too much. It makes a sort of circle of two feet and a half diameter; and, when stretched by the man's body and the tree, it becomes an oval, leaving the distance of a foot and a half between both. With this girth, they tie themselves as it were to the oily palm, and climb up at first with their feet, then working with their hands and knees, till the part of the girth, fastened to the tree, becomes lower than that which supports their reins and thighs, and serves them as a seat to rest upon: then they draw near the tree, in order to raise the opposite end, which is soon after

Method by
 which the
 negroes
 climb the
 the trees.

1750.
April.

after brought down below the part that sustains their reins, which have been raised by working with the feet and knees. The girth cannot slip, because it is always very tight between the man and the trunk, and the latter is moreover very rough. In this manner they soon get to the top: there they sit on their girth, and, enjoying the liberty of their arms, they first cut the bottom of those fruits which they think are ripe; then fastening them to calabashes, they fill these with wine, and let them down by a cord: for they never forget, in going up, to carry with them a bandoleer, containing every thing requisite for this kind of work; such as a cord, a knife, and empty calabashes, to supply the place of those, which they have filled with liquor. When they want to come down, they go a contrary way to work, to what they did in climbing up; that is, they lower the girth from time to time instead of raising it. Their quickness and resolution, in this toilsome task, shew plainly how supple and dextrous they

1750. must be: for it is never mentioned that
 April. any accident has happened them; and they
 have nothing to fear but the breaking of
 the girth.

This kind of vintage must cost the negroes very little trouble, since their wine is so cheap, that you have above forty pints upon the spot for ten sous, and very often for half that price. It is not all made at the same time, according to the custom of making wine of the juice of the grape in temperate countries. The trees furnish daily but a small quantity of this liquor; and they are obliged to consume it directly, because it soon grows sour. The negroes do not drink it till twenty four hours after it is drawn, that is, till it has fermented enough to stimulate the palate agreeably. It is drinkable till the third day, but then it grows heady, and there is danger in being intoxicated with it. After that time it turns into bad vinegar, which soon contracts

Quality of
 this wine.

an abominable smell. For my part, and it will be ever the same with such as

1750.

April.

desire rather delicacy than strength in wine, I always observed that it is delicious when new; and the newer the better: I have drunk of it a hundred times out of the calabashes fastened to the trees, and I never found it better than immediately after it is first extracted: then it has every good quality; which cannot be expected twelve hours after. It has as sweet a taste as is requisite, heightened oftentimes with a light tartness, extremely grateful to the palate. In short, the only fault we can reproach this liquor with, is that it will not keep for exportation to our part of the world, where it would be much more esteemed, than in its native soil. I must own notwithstanding that, as pleasing as this wine may be, yet it has not the good qualities of the juice of the grape. In what condition soever it may be when you drink it, sweet or sour,

1750. there is always a corrosive quality in it;
 April. — at least I have reason to pass this judgment upon it, after having made it my only drink during the fifteen days that I staid at Ben. For, so long as it continues sweet, it is not dangerous, whatever quantity you drink of it: and perhaps I was more affected with its corrosive quality, because I had not been used to any sort of wine.

Plants of
 the forest
 of Kramp-
 fane.

Among the prodigious multitude of palmettos with which the forest of Krampfane abounded, I saw a great many scarce trees and plants. There were two species of *tabernamontana*, which I distinguished by the beauty of their foliage of a lively bright green: there was likewise a new species of *bigonia*, remarkable for the bulk of its flowers, and the singularity of its fruit, which hung like large cucumbers at the end of its branches. Near the village of *Mbao*, I found the pepper plant of *Æthio-*

Æthiopia, that aromatic tree, which the ^{1750.} French who are settled at Senegal, dis- ^{April.} tinguish by the name of *maniguette*. Towards the extremity of the forest, I saw several species of anona's or *corosoliers*, the largest of which were in the woods, the middling ones on the hills, and the smallest in the plains exposed to the sun, most of them loaded with excellent fruit. Following the sea coast from Mbao as far as Rufisk, which is a considerable village two leagues and a half from thence, I walked on sands all covered with sophora *, and with the Guinea aloe †, of which the negroes in that neighbourhood make very good ropes, not so apt to rot in the water.

* *Sophora tomentosa*, foliis subrotundis, *Linn.*
Fl. Zeyl. 163.

† *Aloe Guineensis*, radice geniculatâ, foliis è viridi & atro undulatim variegatis. *Comm. hort.*
Amst. Vol. ii. pag. 39. tab. 20.

From

1750.

April.

From the isle of Goree to Rufisk they reckon three leagues in a direct line.

This voyage I had made by sea: but it is very difficult to land at the village, especially when the sea runs high, because the coast is low, and full of sharp rocks. When you come to anchor opposite the place, you have a most agreeable prospect: the situation of is upon a hill planted with trees; the little rivulet whose brackish waters wind to the right, and form a peninsula; the forest with perpetual verdure, rising behind you in the form of an amphitheatre, constitute all together a most delightful landscape, hardly to be matched in any other part of the world.

The negroes hereabouts seem to me to be very industrious: some of them were busy in beating the leaves of the Guinea aloe, to get out the hemp; others were twisting it, and making fishing

ing lines and nets; others in fine were employed in framing bows and arrows for the chace. After visiting all the

1750.

May.

houses in Rufisk, I was very much surprized upon entering as it were into a second village: this was a cluster of huts not quite so large as the others, covered with sand, and like so many mausoleums or tombs erected over the dead bodies, that had been interred there, according to the custom established among the several clans of the Serera nation.

I had never as yet met with any attack from the negroes till the 4th of May, when walking along the sea-side from Rufisk to Ben, which is above three leagues from thence, I was pursued by a Serera negroe, who rushing out of the neighbouring woods, shot his poisoned arrows against me and my negroe servant. I was above two hundred paces before him; besides I was a very good walker, and used to those fatiguing sands, into which

4th of May,
the author
is attacked
by a Serera
negroe.

1750.
May.

which a person often sinks up to the calf of his leg. I therefore went on, but doubled my pace, without putting myself out of breath, or seeming to mind the menacing signs, by which he hoped to intimidate me and oblige me to stop ; for I had another resource in my gun, suppose he had come within reach. Doubtless this was one of those Serera savages, who are united under the form of a petty republic within ten leagues from thence ; and he was come out of his own country in quest of plunder. Nothing could have tempted him but my gun ; and, had he been more alert and crafty, he would not certainly have spared my life to come at it. This manner of attacking is very common with a race of moors called *Azounas*, who follow no other profession than that of lying in ambush behind a tree, either with a gun or a bow, in order to shoot a person whom they want to rob of his arms. The like accident had happened to me in my second voyage to Podor : but the Moor whom I espied, looked several times before

before he would attack me ; and seemed greatly disconcerted, when he perceived that I was upon my guard, and aimed my piece at him. 1750.
May.

As soon as I was out of danger from the Serera savage, I had all the pleasure in the world in walking along a very white shore, where the sea continually throws up an infinite number of shells. There I beheld two species of what we call the *concha Persica* *, which is the largest upon the coast: the fish it contains, weighs sometimes five or six pounds. The negroes broil and preserve it for times of famine, when they have recourse to this meat, which is tough and insipid, yet a great relief in case of urgent want. There was also plenty of cockles †, and *tonnes* ‡, and a vast num-

Shells on
the coast of
Mbao.

* See the natural history of *univalve shells*, species 8. *plat.* 3. *fig.* 1 and 2.

† See the natural history of *univalve shells*, species 9. *plat.* 4. *fig.* 5. *Faval.*

‡ *Ibid.* of *conchæ operculatæ*, species 2. *plat.* 7. *fig.* 5. *Tesan.*

1750. ber of *bivalvous* shells, particularly what
 May. we call the *concha mucronata* *.

Plants
 found there.

As often as I went to the forest of Krampsane, I took different and round-about ways. Sometimes I directed my steps along the sea-side, and found the *spartium* †, and the *ketmia* with leaves like those of a linden tree, on the banks of the *marigot* of Kann: I likewise met with the *ximenia* ‡, the *rimbot*, the *fagara*, and some *acacia*'s or thorny plants upon hills. At other times I traversed the fertile fields, which were filled with a small species of anonas, and several of those *citron* trees, called *toll* by the negroes. Their fruit resembles very much that of the *man-guier* of India, and has both the figure and taste of a citron. There was no want of

* See the natural history of *bivalvous shells*, species 6, plat, 18. fig. 2. Koman.

† *Spartium scandens*, citri foliis, floribus albis, ad nodos confertim nascentibus. *Plum. cat.* p. 19.

‡ *Ximenia aculeata*, flore villosa, fructu luteo. *Plum. spec.* pag. 6.

game

game in those parts: there was likewise ^{1750.}
a great number of antilopes, and of a ^{May.} small
species of hinds*, hardly as big as
a hare. The latter started as it were,
wherever I trod: one of my negroes
happened twice to dart his hassagaye at
them, and twice he hit his aim: he
assured me that he never coursed this
animal any other way. The hassagaye is
a kind of spear seven or eight feet long,
with a piece of iron at the end of it
like a pike. This is the weapon which
the negroes most commonly use; and they
dart it with their hand. My negroe threw
his with great force and dexterity; and I
learnt a few lessons of him which gave me
great pleasure.

My time was divided among plants, a- ^{Shells at}
nimals, and shells; but the latter occupied ^{Cape Ber-}
me as much as all the rest. I availed my- ^{nard.}
self of the opportunity of being in a coun-
try, where they are in great plenty. The

* *Cervus juvencus, perpusillus Guineensis. Seba,*
vol i. p. 70, tab 43. fig. 1, 2, and 3.

1750. rocks of Cape Bernard and Cape Manuel;
 May. opposite the island of Goree, furnished
 me with a vast number of very beautiful shells, such as the purple fish, the largest species of star fish; and several soft fishes, as sea hares, cuttle fish, and polypus. Among the sands of the creek of Ben, I met with some cockles and *holothuria*. Sometimes I entered the water up to my knees, to extract the shells hidden under the sand, while the negroes went further out to fish. They are accustomed to catch them in this spot with the hassagaye, wading through the water up to the waist, and oftentimes deeper. When they perceive the tunny, the *capitaine*, the fore mullet, or some such large fish, they dart their hassagaye with a marvellous dexterity, and seldom miss their aim. This bay supplies them likewise with a multitude of middling fish, which they catch with nets. They split them in two, and lay them before the sun to dry, and then they sell them to the Moors; these in exchange supply them
 with

Catching
 of fish with
 the hassa-
 guaie.

with millet, which is wanting in their country. 1750.
May.

These fishes procured me an observation, which would not perhaps have offered itself elsewhere. As the negroes leave them to dry on the top of their huts, the lions, tigers and wolves, which incessantly roam in the neighbourhood, are frequently enticed, by the sight and smell thereof, into the village: and then woe be to the children, or even to the men that are found abroad. One night a lion and a wolf happened to enter, both together, into the yard belonging to the hut where I lay: they raised alternately their fore feet up to the roof, which I could easily hear them do, and they carried off their provision. The next day we were certain, by the impression of their feet, which was strongly marked in the sand, that they came together; and we discovered the place from whence they had taken the two fishes: and no

Lions and
wolves
roam to-
gether.

P doubt

1750. doubt but each of them seized his prey,
May.

This was very moderate for two such voracious animals ; but indeed they had not pitched upon the smallest. I know not whether this remark was ever made before, that the lion and the wolf prowl together : yet it is not an uncommon thing ; there are daily instances of it in those parts ; almost every night the wolf is heard to howl, close by the lion. The same thing I have observed, myself, a hundred times, in my excursions up the Niger ; and I am perfectly sure, that the wolf frequently associates with the lion, without having any apprehension of danger. Not that the size of the African wolf, which is much superior to that of the European, makes any impression on the lion ; but the reason is, he is no way tempted by the wolf's flesh. And what confirms me in this opinion, is, that I never observed, that the two lions which were brought up
in

in the village of Senegal, ever attacked ^{1750.}
 the dogs that were exposed to them, ^{May.}
 or that fell in their way, when they
 were unchained; whereas they darted
 instantly upon the first horse, or the first
 child they happened to meet.

A few days after this visit from the ^{Boldness}
 lion and the wolf, we received another ^{of the tiger.}
 from a tigress, which came to the
 same hut along with her young one,
 and likewise carried off two fishes.
 There need only these two instances
 to shew how lazy and indifferent are ^{Indolence}
 the negroes, in regard to the da- ^{of the ne-}
 mage these animals do them, and ^{groes.}
 the danger to which their own per-
 sons are continually exposed. When
 one asks them for what reason they
 do not either chase away those ani-
 mals, or withdraw their fish at least
 in the night; they are satisfied with
 answering, that all the world must
 live, and that it would be a greater

1750. slavery for them to lock up their
May. fish every night than to catch them.

And indeed we must own that the fishery on this coast is carried on with amazing facility.

Their lands lie intirely uncultivated; either, because the sands are too ungrateful, or because, being accustomed to the fishing trade, which costs them less trouble, they neglect all agriculture, and rely on the Moors for every sort of necessaries. These people were here at that time, and had brought their baggage and provisions with them, not loaded upon oxen and camels; as I had seen before to the north of the Niger, but only on asses, of which they had great plenty. With difficulty did I know this animal, he had so fine a coat and looked so handsome in comparison to those of Europe; which I believe nevertheless would make as good a figure, if
the

Asses belonging to the Moors.

the drudgery they are put to, did not ^{1750.}
greatly contribute to deform them. May.

The hair of the Moorish asses was of a fine bright mouse colour, over which the black leather thong which is laid along their backs, and afterwards crosses over their shoulders, has a very good effect. These animals are somewhat larger than ours, but they have likewise something in the make of their heads, that distinguishes them from a horse, and especially from a Barbary horse, which is the natural growth of the country, like themselves, but of a larger size.

I had some time before spent a few ^{Character}
days among the negroes; but I never ^{of the ne-}
made such a long stay with them as at ^{groes.}
present by myself, and remote from any
communication with my own countrymen.
Then it was, that I had an opportu-
nity of being perfectly acquainted with
their character, customs, and manner of

1750. living : I was even present once at their
June. ceremony of marriage : but this would
 make me digress too far from my
 subject ; I shall only observe that in
 general they are very humane and
 hospitable.

10th of
 June, de-
 parture
 from Go-
 ree.

Delayed at
 the bar.

The ninth of May, I returned
 from Ben to Goree, from whence I
 set out the 10th of the ensuing
 month for the island of Senegal. I
 arrived the 15th at the bar, where
 I was obliged to wait for wind four
 whole days. The reader may judge,
 what uneasiness I must have suffered in
 a small vessel, tossed to and fro by
 the rolling billows. There I had lei-
 sure to consider the surprizing effect
 of the waves off the bar, and to di-
 rect my eye all round me, without
 perceiving any thing else but dazzling
 sands on one side, and the liquid
 main on the other. True it is, that
 this sameness of prospect was varied,

a little, by seeing the *pirogues* of the
negroe fishermen, who bravely ven- 1750.
June.

tured over the bar, to bring us provisions on board. Tho' the sea runs very high upon the coast, yet there is a great deal of fish in the road.

Our sailors caught abundance with Fishing of
grondin. their line, especially a sort of sea trush, which is very common in that sea. This fish is very ready to bite; and, as soon as it has laid hold of the hook, it is pleasant to see what jerks and leaps it makes to get free; to such a degree, that it inverts its stomach, which you see issuing out of its mouth in the shape of a carp's bladder: these strugglings are also attended with a hollow rumbling noise, which has given it the name of *grondin*, or *grumbler*, whereby it is known on this coast.

A westerly wind rescued me from this wretched situation, and carried me 20th of
June, ar-
rives at the
island of
Senegal.

1750.
June.

Sea-sick-
ness, what
it is.

over the bar to the island of Senegal the 20th of June. I stood in great need of repose, after the fatigues I had undergone in my voyage, from which I suffered much more, than I should have done from a long fit of illness. Every body knows, that the sea sickness is a kind of weakness or faintness, which causeth a nauseousness and vomiting, more or less, according to the difference of constitutions exposed to that element. Some people are never seized with it: others feel the effects of it but the first day or two, and then it leaves behind it a certain dizziness: others are never seized with this disorder, except when the sea is very much agitated, and the motion of the ship becomes extremely violent: others, in short, and of this number was I, are troubled with it the whole time they are at sea, in short voyages even of two hours, as well as in long ones; in calms as well as in stormy

stormy weather. Robust and fee- 1750.
ble constitutions are attacked with it June.

all the same: there are only some particular habits of body, those of children, for example, and persons weakened by sickness, and a few others in health, that are exempt from it. But of the latter, why some should be subject to, and others free from this illness, is not yet known. The general utility that would result from this knowledge, which, in so learned an age, might pass for a real discovery, deserves the attention of the gentlemen of the faculty*, who have occasion to perform a voyage by sea, or an opportunity of making these experiments. If once the cause of this malady were known, some safe

* To serve the gentlemen of the faculty, who may chance to set about an inquiry into the cause of this disorder, I shall insert here a few more remarks which I have made on this subject. 1. Those who were sick during the

1750. safe preservative might be found out,
June. which would render this element accessible to persons, who, with abilities and the best disposition in the world for sea voyages, are often discouraged merely by this obstruction.

To the whole voyage, the first time they embarked on board a middling ship of 500 tuns, did not feel a dizziness or head-ach, till after four hours were expired; the vomiting did not come on till the seventh hour, and continued the whole time of the voyage, which was two months.

2. When I did not stay long enough at sea to be troubled with a vomiting, it seized me an hour or two after I went on shore, whether I had eaten or not at my landing. 3. It very rarely happens that a sea sickness produceth a fever; it only disorders the stomach, without taking away the appetite. 4. I observed that more women by far than men, escaped this illness; and more of those who are short-sighted than otherwise. 5. Finally, I took notice, that those who have been most afflicted with this complaint at sea, have always much better health on shore, than such as seemed to be the most vigorous and hearty at sea.

1750.

June.

To such a degree had this complaint (which does not however meet with its due degree of pity) ruined and disordered my stomach, that, upon my arrival at the island of Senegal, I saw no other way to re-establish my health, than by fixing my abode there, and renouncing all sea voyages, with a firm resolution not to go to sea again, till my return to France. Besides, I had reason to be satisfied with the voyages I had already made, as they had turned out so greatly to the advancement of natural history, so far as it regards the southern parts of our settlement: and the neighbourhood of the island of Senegal, and the Niger, was likely to furnish me with many observations in physics and natural history, which had escaped me before. I staid therefore on this spot some years longer, during which time, besides these remarks, I had leisure to draw a few topographical

The author
relin-
quishes all
sea voy-
ages.

1750. phical charts, by which I designed
 September. to steer my course in my little voy-
 Plan of a ages. In the sequel of this narra-
 map of the tive, I shall only take notice of the
 neighbour- hood of Se- most remarkable occurrences in those
 negal. excursions in the neighbourhood of
 the island of Senegal.

4th of Sep-
 tember,
 he is catch-
 ed in a vio-
 lent storm
 in the mid-
 dle of the
 river.

I had been long desirous of mak-
 ing a visit to the village of Kionk,
 which is in the wood island, within
 a league north of the island of Se-
 negal. Thither at length I went the
 fourth of September in a shallop:
 but I was not fortunate in my re-
 turn, for, when we were in the
 middle of the river, a violent east-
 wind arose, which warned us to make
 the best of our way to land, in
 order to avoid the impending storm.
 And indeed, I had hardly crossed the point
 of the *Wood Island*, when the tempest
 burst. As it was impossible for me
 to reach the shore, make what
 haste I would, and the danger was
 im-

imminent, I immediately made for the sand bank, which joins this point to the island of Senegal. The negroes belonging to a *pirogue*, which had been also caught in the storm, leaped into the water up to their waist on this very sand bank, and and upheld it against the violence of the waves, which had overwhelmed it in the beginning: their example was followed by the six negroes belonging to my shallop, and by ten other men and women passengers, who jumped immediately into the water, and, dividing themselves all round the boat, supported it against the raging elements. This was the surest way to hinder it from being overfet, or thrown upon the bank, where it would have been infallibly broke to pieces: and we had reason to be afraid of one or other of those accidents, the bed of the Niger being considerably widened in this spot by the junction of its two branches, which form a kind of lake, of so spacious an

ex-

1750. extent, as to be open one very side to rav-
September. ing tempests. The present weather might really deserve that name, the wind and rain being attended with flashes of lightning and loud claps of thunder. Notwithstanding that the negroes were so careful as to uphold my boat, yet this did not hinder it from making a foot and a half of water, partly with what fell from the heavens, and partly with the waves, which sometimes inwrapped it in the form of a sheet, in which I was also enveloped. Besides, I was washed, and, as it were, scowered by the rain, which the wind impelled against me with the utmost violence : and it came so very quick upon me, as almost to take away my breath, though I had sheltered myself under one of the sailor's cloaks. Thus the boisterous elements drove my negroes and the boat with such force, that I began to be afraid both for them and for myself. Yet they did not let go their hold ; their courage supported them upwards of two hours, and preserved us from ruin.

This

1750.

September.

This whirlwind began at three o'clock in the afternoon, but did not afford matter of observation, till towards the end. The wind ceasing about five, gave us an opportunity to steer to the north point of the island of Senegal. This was the nearest land, and I was in a hurry to reach it, in order to dry myself as soon as possible; for the boat was still half full of water, notwithstanding the pains the ten passengers had taken to empty it, as fast as the waves broke over it, which was almost every instant. While we were advancing with our oars, there appeared a phænomenon, which I had never seen before so near; and which I do not remember, that any writer has ever mentioned it. This was a kind of ball, like unto a column of smoke, that turned round upon itself: it was from ten to twelve feet broad, and about two hundred and fifty in height; its base was upon the water, and an easterly wind was wafting it

Very dangerous ball of fire.

1750. towards us. As soon as the negroes
September. saw it, they rowed as hard as they
could to avoid it. They were better ac-
quainted than I with the danger, to
which we must have been exposed,
had this whirlwind burst over us;
its usual effect being to stifle those
it envelopes, with heat, and some-
times to set some of their houses on
fire; and they knew several instances of
people, who had lost their lives by
the like accident. They were so for-
tunate, as to leave this dangerous phænomenon upwards of eighteen fathoms be-
hind the shallop, and they congratulated
each other upon having so luckily escap-
ed a torrent of fire, which by day-
light appeared only as a thick smoke.
The heat thereof, tho' at the distance of
above a hundred feet, was very strong, so as
to make my clothes smoke, tho' it had not
time to dry them. The atmosphere had
then 25 degrees of heat, and I believe that
the column of smoke must at least have had
fifty,

fifty, to render the humidity sensible to us. It left behind it a very strong smell, more nitrous than sulphureous, which annoyed us a long time, and the first impression was made by a light stimulation in the nostrils. This occasioned some to sneeze, but in me it produced a heaviness and difficulty of respiration.

In the month of March, in the year 1751, I began to take the plan of the neighbourhood of the island of Senegal. The eighth, I set out in my *piroque*, with my two *cu-balots*, (the name usually given to the negroe fishermen) intending to make a tour round the island of Sor by water, as I was well acquainted with the inland parts. I therefore went up the Niger, keeping close along the island, up to its northern point, in order to enter the *marigot* of Kantai, which washes its eastern shore, and to

1751.
8th of
March, ex-
cursion
round the
island of
Sor.

Marigot of
Kantai very
ful of fish.

Q

trace

1751. trace its course. As soon as I entered
March.

— it, I thought myself rather in a fish-pond, than in a river from fifteen to twenty fathoms broad ; so greatly did it abound with fish. It was a pleasure to sail along a stream as transparent and smooth as glass, while the banks were planted with very high mangroves, which afforded a verdant shade above the space of a league. The fish bounced and leaped on every side of us ; but what was most extraordinary, wherever we passed, some of them were continually leaping into the boat. The largest, as the best jumpers, passed over us ; but almost all the middling ones fell in. As their motions in whirling about, did not seem natural or voluntary, I examined into them, in order to discover their cause : and I found, most of them had received the impression of teeth on some parts of their bodies ; from whence I concluded, that they had been pursued by
the

the larger fish, that wanted to prey upon them. For two hours that I kept sailing along this *marigot*, I reckoned two hundred and thirty fishes called *carpets* *, which were catched in this manner without any other artifice. This was a moderate fishing to my negroes : as they were *cubalots*, that is, fishermen by trade, they did not seem to be much surprized at it : nay, they told me, that, when they fished for the large fish with the line or rod, they let their *pirogue* go down the current of these little rivers, and frequently depended more on the small fish that were taken in this manner, than on the chance of the large ones.

Never had cormorants, duckers, and falcon-fishers, finer sport : and indeed all the mangroves were covered with them. The falcon-fisher, which the Jallofs call by the name of *nguiarkol*, and the French

Bird called
falcon fish-
er.

Q 2

by

* A sort of fish like a carp, but shorter.

1751.

March.

by that of *nanette*, is a bird about the bigness of a goose, with brown feathers, except the head, neck, breast, and tail, which are a beautiful white. It has a strong hooked bill like an eagle, with sharp talons, incurvated in a semicircular form, which it uses most dexterously in fishing. It generally perches on trees near the water; where as soon as it sees a fish draw near the surface, it darts upon, and seizes it with its talons. I killed one of them, which made my negroes look upon me with a very bad eye, because they fear and reverence this bird: they even carry their superstition so far, as to place it among the number of their *marabouts*, that is, of their priests, whom they look upon as persons sacred and divine. Yet they were appeased, when they saw, I had got them a fish of above four pounds, which this pretended *marabou* had carried to the bank

bank of the river, in order to feast upon it. 1751.
April.

There happened to me another adventure, of much the same nature, on the 22d of April, at the village of Sor. I was sitting on a mat in the middle of a court yard, with the governor of the village, and his whole family; when a viper of the mischievous kind, after winding round the company, was drawing near to me. This familiarity I did not at all relish; and, to prevent any accident, I thought proper to kill it, directly, with a stick I had in my hand. Instantly, the whole company starting up, made loud outcries, as if I had committed murder; and they all flew away, so that the place was soon deserted. As the affair grew serious, and the report thereof was spread over the village, I laid hold of this opportunity, now that I was by myself, to put the viper into my handkerchief, and to hide

22d of April, a very extraordinary scene in regard to a viper.

1751. it in my waistcoat pocket. This was the
April. best method to make sure of this animal,
 which is so difficult to be had in that coun-
 try; and at the same time the way to
 calm their minds, by removing it out
 of sight. I was not very safe upon that
 spot; and, perhaps, they would have
 done me some mischief: but the master
 of the village, a man of good sense,
 in whose house this whole affair had
 passed, soon reflected that both his ho-
 nour and interest called upon him to
 quiet the tumult, and to silence the
 report. This he did effectually by means
 of his authority as governor; though
 his prudent conduct, and his character
 as *marabou*, were of no small assistance
 to him. This specimen shews how zea-
 lously the negroes are attached to their
 religion, and to their superstitious obser-
 vances. They do not look upon ser-
 pents as deities, yet they respect them
 enough not to kill them: they let them
 grow and multiply in their huts, though
 these

The ne-
 groes are
 very super-
 stitious.

these animals frequently eat their chickens, and dare to lie as it were with themselves. True it is, they seldom hurt any body; they must be either attacked, or wounded, or trod upon, before they will be provoked to bite.

1751.
May.

The 7th of May, I fell down the Niger, in order to visit the *Marigot* of Del, which is not very far from its mouth. The wind was favourable; and my negroes, to avoid the trouble of rowing, put up their sail. A *pirogue*, only thirty feet in length, could not want a very large sail; and indeed they were not much at a loss to find one. A negroe erected a pole, of about ten feet, in the fore part of the boat, and then set another small stick across the top of it, whereon he hung his *paan*. These *paans* are very useful: their shape is such, that you may occasionally make them serve for a sail, a sheet, a bed covering, a cloak, a petticoat,

7th of May,
excursion
in the Ma-
rigot of
Del.

1751. coat, or a fash. I cannot compare the
 May. figure of this sail to any thing better,

than to that of a banner or stand-
 ard; with the two lower ends fast-
 ened to each side of the *piro-*
gue. The negroe who was upon
 the poop, steered with his paddle;
 while the other managed the sail,
 and turned it to the wind. With
 this feeble aid, I advanced near two
 leagues in less than an hour's time,
 and arrived at the entrance of the *ma-*
rigot of Del. Just where it discharges
 itself into the Niger, it is stopped up

Its entrance
 is stopped
 up by a bar.

by a bar of sand; where the river
 is sometimes so rough, when a north
 wind blows, as to hinder the large
piragues from entering. My people con-
 certed their matters so well, that they
 got over the difficulty, and, after conduct-
 ing me through all the windings of
 the *marigot*, they landed me at the
 village of Del, which was built on
 the extremity of a bank of shells,
 that

that extended near a league to the northward. It appeared remarkable,

1751.

May.

that this bank was intirely bare to the surface, and that all the shells were of one species of oysters, which had heretofore lived on the mangroves of the neighbouring *Marigots*, in the same manner as I had observed of these in the river *Gambia*.

Bank of shells.

The sea had brought into the Niger a prodigious quantity of sea *poumons* and *velettes*, which upon my return I had leisure to see floating on the water. The former of those fishes are known in this country by the name of Flemish caps, and the latter by that of *galeres* *. Nothing can bear a nearer resemblance to a bladder filled with air, and painted a beautiful red, than the body of the *galere*. You can hardly dis-

Galere, a kind of sea worm.

* *Urtica marina soluta purpurea, oblonga, cir-
rhis longissimis.* Sloan. *Jam. Vol. I. pag. 7. Tab. 4.
Fig. 5.*

1751. distinguish any other part of it than a
 May. fringe upon the back, and eight fillets
 under the belly, that descend downwards, to serve, as it were, for a ballast to the bladder, which floats above water, and is tossed to and fro by the winds. This animal, though unshapen, and almost without any sensible motion, is caustic to such a degree, that, when you touch it, you immediately feel a pain as if you were burnt. I took one into my hand to make a trial, and held it till I began to feel its effect: this appeared externally by a little redness, followed by a pricking and an inflammation, which did not cease till four hours after. The pain was communicated to all the tender parts of the body, as to the face, and especially to the eye-brows, by a very slender contact of the hand inflamed.

Precau-
 tions to ob-
 serve the
 heats.

The remarks I had made for some years,
 with great attention, and with particular
 views,

views, in regard to the heats of the country, appeared to me important enough to be enlarged, in such a manner, as to render them susceptible of comparison. I resolved therefore to observe, during the hottest days in the year, the degrees marked by M. *de Reaumur's* thermometer, when exposed to the open air; and those which a second instrument of the like nature, would mark, during the same time, in the sands exposed to the sun. M. *Andriot*, who, besides, being extremely well skilled in natural philosophy, is a very accurate observer, was of great assistance to me on this occasion: for he was so good, as to be at equal trouble with me, whenever I wanted a person to make experiments in one place, correspondent to those I was performing in another. Such was the tribute we mutually paid to the friendship, which had so closely united us ever since our youth.

1751.
July.

4th of July,
surprizing
heat of the
sand.

I pitched upon the 4th of July, to make one of those important observations on the island of Senegal. The sun was then distant from our zenith, no more than seven degrees north, so that it might be looked upon as vertical towards noon-day. The Savanna which extends west of the fort St. Lewis, like a great plain, level with the neighbouring sea, and exposed to the winds on all sides, especially to the west, which blew that day, afforded me the best place I could desire for my purpose, because it has no shelter. A little sand-hill about four feet high, that stood very conveniently in the middle of the plain, was the spot on which I set an exact thermometer before the sun, fixing the ball in the sand. I placed it towards ten o'clock in the morning, and there it staid till three in the afternoon. During this whole time, I observed the degrees of af-

ascension in the liquor of the thermometer every five minutes. M. *Andriot* kept an account thereof, under a small shed of straw, whither I retired from time to time, to screen myself from the rays of the sun, which made my head very dizzy. He staid to watch this instrument, and to make his observations, while I went to the fort, in order to consult another thermometer, which I held continually suspended in the open air, in the shade, eighteen feet from the ground, to avoid the reflection of heat. This marked 30 degrees for the heat of the open air, in the coldest exposition of the island, while the other marked the heat of the sand at 60 degrees $\frac{1}{3}$. I had put three eggs into the ground, and covered them with sand, where I left them about three hours, in order to know for certain what effect this heat would produce upon them :

1750.

July.

Eggs boiled there.

1751. I perceived they were not hard,
September. but the white stuck a little round the
 shell; and they were fit for eating:
 accordingly we dined upon them, and
 found them very good. There is reason
 to believe that, if the tube of the
 thermometer had been long enough to
 give more room for the liquor to
 play, it would have ascended a great
 deal higher than 60 degrees $\frac{1}{3}$, as I
 perceived afterwards, upon repeating
 these observations with other thermo-
 meters graduated up to boiling water.
 I shall not descant any further on these
 experiments; it will suffice at present
 to have only hinted at them, as I in-
 tend to enter into a more minute de-
 tail, in my treatise of observations on na-
 tural history.

9th of Sep-
 tember,
 violent
 storm.

The ninth of September, there arose
 in the night a violent east wind, which
 brought on a very heavy rain, attended
 with such quick flashes of lightning,
 that they seemed to be one continued co-
 rus-

ruscation. The thunder burst at the 1751.
same time in two different places in the ^{September.}
island of Senegal; one was the mast of ^{Effects of}
a vessel; the other the hospital; within ^{thunder.}
two hundred fathoms of one another
on the same bank of the Niger. That
which fell on the hospital, did no
other harm than breaking two wea-
ther-cocks on the same pavilion, knock-
ing a few tiles off the top of the
house, splitting several of the rafters, and
bursting three stones on the floor, where
it spent itself on the lime, without
hurting any of the sick that were very
near. There was something more
remarkable in what happened to
the mast of the ship, which was
about forty feet high, and done all
over with pitch and tar. The thunder
furrowed it two inches deep, but un-
equally, from one end to the other, with-
out touching the iron work, the tack-
ling, or any of the pitched cordage
with which it was surrounded; and it
spent

1751.
September.

spent itself on the quarter deck, which was covered with a large tarpawling of thick canvass, also done over with pitch and tar. It seems as if the rosin broke the violence of the thunder, and diverted it another way. It is well known, that the outsides of those vessels are well secured with pitch and tar, so that their external surface may be considered as one continued lay of rosin.

Effects similar to those of electricity.

A negroe, who had been entrusted with the care of the ship that night, having lain himself down to sleep in the back cabin, felt a sudden shock, of which there remained very strong impressions the next day, in every part of his body. I leave it to philosophers, curious about this sort of phænomena, to judge, whether there can be a greater analogy between the ordinary effects of electricity, and those produced on this occasion by thunder.

Floating island on the Niger.

The waters of the Niger were so swelled with this storm of rain, and rushed

rushed on with such precipitation, that they loosened, four or five leagues from thence, a little slip of land which floated along with the stream. The next morning it was seen, like another Delos, following the current of the Niger, and steering its course towards the sea. Its agreeable verdure, and the beautiful disposition of the trees with which it was covered, gave it the air of an enchanted island, and raised a desire in the inhabitants of Senegal to get it into their possession. Immediately a boat was sent, and overtook it; the sailors fastened several ropes to the trees, and obliged it, in spite of all the resistance it could make, to join the sands of Senegal. The whole village flocked to see this curious spectacle; never had they beheld so delightful an island: they all seemed eager to go upon it, but were afraid of its roots, which they took for

1751.
September.

1751. serpents. I measured it, and found
September. it but four fathoms diameter: it was round, and bore only a spinous shrub ten feet high, to which the negroes give the name of *billeur* *. Its roots were extremely close and inter-twisted one within the other: they held but very little clay together, which the water could not wash away. The wood of this plant is a vast deal lighter than cork: the inhabitants of the country make use of it in fishing, when they want to swim over the river, where it happens to be too broad.

The negroes are all excellent swimmers.

The negroes are all excellent swimmers; and nothing can be a stronger proof of this, than the intrepidity, with which they expose themselves on the bar. The twenty-fifth of the same month, I was on the sea-shore, busied in observing the height of

* A new species of sesban.

of the equinoctial tides, when a French vessel arrived opposite to the fort ^{1751.}
September.

of Senegal. The ship's boat advanced towards the bar ; and there waited till some body from shore came to see what dispatches it brought. The negroe, who was used to this business, jumped into the water to fetch the letters, though there was a greater swell than usual, because the tides rose to a higher pitch. To behold the violent agitation of the sea, the billows rising above ten feet, and then falling like so many sheets of water, with prodigious noise and weight, one would never imagine that he could possibly surmount them : yet he passed them all, riding upon the backs of some, and plunging under others, where he seemed to be buried, till at length he happily got on shore, with the dispatches committed to his care. Neither is the sea the object most to be

1751. dreaded during this passage; there are
September. such terrible *requiens* on the bar, that they oftentimes devour the divers. No doubt but it was owing to some accident of this kind, that a negroe disappeared this very month, and was never more heard of.

Trembling
 fish.

The next day we caught a fish in the river, that has very little relation to any of the known inhabitants of the liquid element. Its body is round, without scales, and smooth as an eel, but much thicker in proportion to its length. The negroes call it *ouaniear*, and the French *trembleur*, or *quaker*, from the effect it produces, which is not a numbness like that arising from the cramp-fish, but a very painful trembling in the limbs of those who touch it. This effect did not appear to differ sensibly from the electrical motion of the Leyden experiment, which I had felt several times: and it
 is

is communicated in the same manner by simple contact, with a stick or iron rod five or six feet long; so as to make you instantly drop whatever you hold in your hand. I have tried this experiment several times, as well as that of eating of this fish, which, though very well tasted, is not equally proper for all constitutions.

1751.
September.

The island of Senegal, as I have several times observed, is no more than a naked sand-bank, which produces but a few herbs, and those insufficient and improper to feed the company's flocks. This has obliged them to look out for a place, where the cattle might find pasture, and security against the depredations of the Moors and the negroes. These advantages are in some measure found on a pretty large island, called Gri-el, within two leagues north of Senegal. The conveniency of getting to this place, by means of a small ri-

1751. ver of the same name, and the agree-
October. able description I had heard of it, in-
 duced me to take a trip thither for a
 few days. I set out the 2d of October,
 by the same canal, which is parallel to
 the principal branch of the Niger, and
 separated all along from the sea, only by a
 narrow neck of sand, about a hundred
 fathoms at most in breadth. It was
 covered with pelicans or wide throats,
 which moved with great state, like swans
 upon the water. Without doubt, these
 are the largest birds in the country, next
 to the ostrich. I killed one, whose
 wings, measuring from one end to the
 other, were above ten feet wide. Its
 bill was upwards of a foot and a half
 long; and the bag, fastened underneath,
 held near two and twenty pints of
 water. This bag is not only for
 fishing; but is like a kind of cast-
 ing net, which nature hath given those
 birds, to facilitate the means of pro-
 viding for their wants. It could
 not

2d of Oc-
 tober, voy-
 age to the
 island of
 Gndl.

not be given to any animal that knows how to make better use of it, for they may be said to fish in perfection. They generally swim in flocks in deep water, and form at first a large circle, but contract it afterwards, by drawing near one another gradually, in order to bring the fish along with them, which the motion of their feet has confined within that space: and as soon as they see a sufficient number of them together, they plunge their bill wide open into the water, and shut it again as quick as a fisherman casts and draws his net. In order to empty their bag of the water with which it is filled, they only lean their bill on one side, and open it gently; then the water runs out, and leaves the fishes dry, which they eat very quietly on shore.

1751.
October.

Their
manner of
fishing.

When we were within a quarter of a league of the island of Griel, we thought we saw a beautiful avenue of

Prospect
from the
wood of
Griel.

R 4

trees,

1751. trees, which presents itself sideways:

October.

their symmetry would even make one imagine, that they were planted on purpose to form a delightful vista; yet they were only calabashes, sown by the hands of nature, and easily known by their make and size. Except these trees, of which there is a great number on this point, and a few mangroves, there are hardly any others on the island. The meadow is on this same side, on a red sand hill, which is sown here and there with a few shrubs, and especially with tithymals, whose white flowers are agreeably intermixed with the lively colours of the superb lily * by which they are topped. The rest of the island is a smooth even plain, the greatest part of which is laid under water during the rainy season: it is uncovered in the winter by draining the waters into a small rivulet, which seems to form

* A new species of *methonica*.

form a little isle in the larger island of Griel. This part balances the good qualities of the other; for it produces only two sorts of plants*, of which the cattle do not seem to be very fond.

1751.
October.

After passing the rivulet that separates the little isle from the larger island of Griel, I found towards the north the village of Dounn on a reddish sand, the ground somewhat higher, and surprizingly fruitful. Proceeding still further north, I came to the village of Nguiago, from whence I perceived, at the distance of a league to the right, the village of Torkrod, which is separated from thence all the way, by a morafs. As this morafs is full of water and reeds, it abounds with aquatic birds, such as curlieus, woodcocks, teals, and wild ducks. The latter are

Village of
Dounn.

Nguiago.

* The marine crista or salicornia, and Linnæus's *ariffa*. *Spec. Plant.* p. 223.

1751.
October.

are of a small size, and a little different from our European wild duck: there is such plenty of them in this neighbourhood, as to cover a very large tract of ground: they shew themselves by thousands, and you kill them as it were by thousands. It is not uncommon to see thirty of them drop at one shot, and oftentimes twice the number. True it is, that these lucky shots are reserved for the negroes: for besides their being very good marksmen, and their making use only of those large fowling-pieces called buccaneers; and aiming at those birds only upon level ground, and in large plains, they have still another advantage over Europeans: they can draw near the game, by means of the colour of their bodies, which being black from head to foot, are confounded with the verdure of the field; whereas the white face of the Europeans, or the smallest bit of a sleeve or neckcloth, is perceived afar off
by

by those birds, and the least noise in the world frightens them away, before you come within reach of them.

1751.
October.

The negroes of this neighbourhood are obliged to lie on very high beds, in order to be sheltered from the musketoes, of which there are great swarms, especially in this month. These beds are from five to six feet square, and consist of a double texture of sticks laid very close together, and supported by four posts, which are raised eight or nine feet from the ground. They mount this kind of platform by step ladders, fastened to two of the posts perpendicularly over one another. This situation is far from being convenient; for it is very difficult to ascend those ladders, most of them being out of order by frequent mounting; and one's foot is apt to slip towards that side which they incline to: yet the negroes climb them with great ease.

Beds of
the negroes
of Griel.

Position.

At

1751. At sun-set, the musketoes issue forth in
October. swarms, and then the negroes betake

themselves to their platform. There they sup and smoke, and chat for a great part of the night, after which they sleep till day in the open air. I had never used the precaution to take a tent with me; so that I lay with them and in their manner, that is, almost naked, the great heat not permitting me to wear any sort of garment. The musketoes indeed were not so troublesome here as under cover; still they sucked a good deal of blood, and every morning I had my face disfigured with pimples. This, however, did not hinder me from passing my nights very agreeably.

Beautiful
 sky at Seneg-
 gal.

Besides the amusement I received from the fables dialogues, and witty stories, with which the negroes entertained each other alternately, according to their custom; I was ravished with be-
 hold-

1751.
October.

holding a sky, ever blue and serene, and bespangled with stars that shone forth with the brightest lustre. Raised on this platform, as on a small observatory, open on all sides, I could easily accompany those luminaries with my eye, in their common revolution from east to west. Oftentimes, I did not lose sight of the upper edge of the disk of the sun and of the larger stars, till they plunged under the horizon of the ocean: and it was not uncommon for me, to pay the same attendance upon some stars, much below the second magnitude; though they could not be discerned after their rise, till towards the third or fourth degree of their ascension above the horizon, by reason of the vapours, which are more frequent upon land.

The negroes likewise pointed to me a considerable number of the stars, that form the chief constellations, as Leo, Scorpio, Aquila, Pegasus, Ori-
on,

The negroes have some knowledge of the stars.

1751.
October.

on, Sirius, Procyon, Spica, Canopus, besides most of the planets, where-with they were well acquainted. Nay, they went so far, as to distinguish the scintillation of the stars, which, at that time began to be visible to the eye. It is amazing, that such a rude and illiterate people, should reason so pertinently, in regard to those heavenly bodies: for there is no manner of doubt, but that, with proper instruments and a good-will, they would become excellent astronomers; by reason that they live in a climate that enjoys a clear sky, almost the year round; and, as they spend their time out of doors, they have all manner of conveniencies for examining, every moment, into what passes in the starry regions.

The negroes huts are frequently burnt.

A few days after my return to the island of Senegal, the north part of

of the village was burnt down to the ground. The reader may easily imagine what havock the flames, especially, when fanned by a very strong north-east wind, must have made among a parcel of straw huts, that stood extremely close to each other, and had been dried by the heat of the sun. In vain did the marabouts climb on the top of the cottages, and spit into the blaze ; in vain did they mumble over their prayers, and act a thousand ridiculous mummeries : not one of the huts, over which they performed those charms, escaped : neither was the fury of the flames assuaged, till the inhabitants, finding the inutility of those superstitious incantations, bestirred themselves with all their might, in throwing water and sand to extinguish the fire. The day following, they endeavoured to repair their loss: new cottages were raised on the same spot ; and in a few days

1755.
October.

1751.
October.

days there were no vestiges remaining of the damage done by this conflagration. So common are these accidents in this country, that I remember some years, wherein not a month, nay sometimes not above a week or a fortnight elapsed, without one hut or another taking fire : and sometimes it spreads with such fury, that, in the space of five years, one half of the village of Senegal, extending very near four hundred fathoms, was twice burnt down to the ground, in less than four and twenty hours. The cause of these misfortunes, is frequently unknown, for they commonly happen in the day-time, during the most scorching heats of the sun : and the negroes are so used to them, that they seldom lose either their lives or effects, so that they expect them continually, without living under any great apprehension.

The

The island of Sor is divided into two unequal parts by a small *marigot*, the mouth of which is opposite to the fort on the island of Senegal. I entered it the first time, in my *pirogue*, the 8th of December. This rivulet is so narrow, that the branches of the mangroves on each side join together, and form a kind of isle or covered alley, which extends almost a quarter of a league in length. I paid dearly for the service those trees did me, in sheltering me from the heat of the sun; for in an instant I was attacked by a prodigious swarm of musketoos, and large flies, * whose stings are as painful as those of bees. My negroes, being naked, suffered infinitely more than I: their bodies were covered with these insects in such a manner, that they made several rows close upon one another. I really believe such a spectacle was never seen before; and that all these stings drained them of as much blood, as they

1751.
December

8th Decem.
Excursion to
the *marigot*
of the cro-
codiles.

Very much
incommoded
with the
musketoos.

* Tabanus. The gad-fly.

S

would

1751.
December.

would have lost by a copious bleeding. This canal must have been the great thoroughfare for the musketoes coming from the bottom of the wood, which seems to be the general magazine of the country, from whence they issue out in swarms, and spread themselves among the villages and other places inhabited by man or beast.

Frequented
by very
beautiful
birds.

Were it not for the above inconvenience, this rivulet would be the finest place in the world for a trip on the water. The breadth of it is from two to four fathoms; with as many, and sometimes more, in depth. It is frequented by a great number of birds, all excelling each other in beauty; and especially by several species of the king-fisher, whose plumage is agreeably depicted with variety of the most lively colours. There you hear also a continual warbling of birds, with repeated echoes from the many trunks of trees, with which the banks are lined. The
two

two extremities thereof are stopped up with a shoal, which admits of none but *pirogues* to enter: yet taking the opportunity of the tide, shallops might be sent up it by the *marigot* of Kantai, to cut down a considerable quantity of mangroves, most of which are from twelve to fifteen inches in diameter, and might be of excellent use for timber to build houses. The bank at the east end of the rivulet is a slimy sand, which is bare at low water. When I passed that way, half a dozen crocodiles lay stretched out before the sun, immoveable, like so many pieces of log-wood, on the ground. Whenever the negroes come near this place, they are sure to find these animals here; and thence it is that they call this rivulet the *marigot* of the *diasiks*, which, in their language, signifies the rivulet of the crocodiles.

1751.
December.

Considerable
mangroves.

To the right of this shoal, I entered the *marigot* of Kantai, where the negroes were at that time very busy in

Fishing of
the lamantin
or sea-cow.

1751.
December.

fishing for the lamantin, or sea-cow. This fish, which has been mentioned by all voyagers, and which many have described without being well acquainted with it, and which probably gave rise to the fable of the mermaids, deserves so particular a description, that I shall be excused from saying any thing more about it in this compendious narrative. There does not pass a year in which the negroe inhabitants of this neighbourhood, who have reserved the fishery to themselves, exclusive of all others, do not catch half a dozen, the greatest part of which they sell to the fort of Senegal. It is caught only in December and January, which are the most favourable months. The flesh of it is fine eating; being of the colour of veal or pork, and in taste partaking of both; but it seldom is so tender.

The sea
breaks in
upon the
Niger.

Ascending the Niger, as we came out of the *marigots* of Kantai and Guiara, I saw along the coast of Barbary the several
gutters,

gutters, which the sea had made the day before by dashing with such violence against the sands. It was still high enough to pour its waters into the river: and what is very remarkable, in regard to this effect of a swelling sea, is, its having appeared several years successively during the winter solstice, and not in the equinoxes, as if the tides were stronger in that season of the year than in this.

1751.
December.

Notwithstanding that I made all the haste I could, yet I did not get back to the point of the island of Senegal till six in the evening; and when I reached the fort, it was night. For in those countries, where the nights and days are almost equal the year round, they have but very little twilight, and there is not the difference of a quarter of an hour between sun-set and darkness: so that, as soon as it is ten or fifteen degrees below the horizon, an opaque gloom spreads itself over the surface of the earth, and it is then as dark as midnight.

Very short
twilight.

1752.
June.

8 June. Till-
ing of lands
in the isle of
Sor.

Pleased with what I had learned by a constant navigation for several months successively, in all the small rivers of the neighbourhood of the isle of Sor, I was not willing to lose the opportunity of seeing their method of tillage, which was to be in the beginning of the month of June, the next year, in that island. Early in the morning, the 8th of June, all the inhabitants attended the lord of the village into the field, singing and dancing as on a great festival: Some carried their tabour and pipe; others had no other tool or instrument than a small spade helved with a stick, which was bent in the middle, and long enough to prevent their being obliged to stoop to work. After they had all danced a few minutes on the very spot, the latter, without interrupting the cadence, began to throw up the ground with their spades, in order to root out the weeds. During this operation they accorded so well with the sound and measure of the instruments in their motions and singing, that you would have

have concluded all those husbandmen to be professed dancers and singers. It was pleasing to see how they tossed their arms and legs, and into what contortions they threw themselves with an air of content, according as the sound of the tabour was more or less quick, and as the *guiriots* gave more life to their singing. They were not to leave off working till night; in two days they were to resume their work again: and then their task consists in digging with the same spade a few holes, into which they throw a few grains of millet, over which they immediately spread the earth with their feet. When this is done, they rely upon the rains for every thing else, and they are excused from all kind of labour till harvest-time. Their *lougans*, for such is the name they have given to their ploughed lands, are generally enclosed with a hedge of thorns, or a kind of tithymallus, or herb spurge, which is never very large, nor tall. The bark of it is so white as to render it re-

1752.
June.

Sowing.

Tithymallus

1752.
June.

markable above all other trees. It grows very fast after the manner of all soft wood, and when cut, it sheds a large quantity of white thick liquor like milk, which flows in great abundance.

Birds of the
island of Sor.

Goose.

When these husbandmen were set about their work, I left them to go a shooting as far as the village of Sornguiann, which is within a small half league of Sor, or Sor-baba. I killed some woodpeckers, partridges, larks, and a few geese. The geese of this country, which the negroes call *bitt*, have nothing pleasing in the colour of their feathers; but they are remarkable for a large bunch on their head, crowned with several caruncles, which serve for an ornament. Their shoulders, just on the spot where the inflection of the wing is made, are also armed with a horn like a prickle, near an inch in length: and they use it very dexterously against birds of prey that want to attack them.

My

1752.
June.

My coursing was greatly improved by the discovery I made, keeping along the bank of the neighbouring *marigot* of Sor-baba. There were fresh traces impressed in the sand, which I easily found to have been made by a crocodile: this excited my curiosity: I wanted to follow the scent, in order to find out this animal; but after seeking for it in vain, I came to a place about fifty paces distant from the rivulet, where the sand seemed to have been disturbed. My negroes judged that this might be the place where the crocodile layed its eggs; and they were not mistaken: for, after digging about half a foot, they found thirty eggs, which they carried away, intending to make good cheer with them. They were hardly larger than goose eggs, but cast a small scent of musk, which would doubtless have been very agreeable to those who like that smell.

I had been now upwards of three years in the country without having had any opportunity

1752.
June.

20 August.

Voyage to
the *lime*
marigot.

opportunity of seeing the *lime-kiln*. This is a place so called from the lime made of shells, of which there is prodigious plenty in that neighbourhood. As it is on the bank of a small river, which communicates with the Niger, the passage to it, from the island of Senegal, is easy by water. I arrived there the 20th of August on board a vessel which was going to load with lime. This is one of the most delicious countries upon earth, being diversified with large plains, agreeable valleys, excellent pasturage at all times for black and for small cattle, and with little rivers, the banks of which are covered with mangroves and other trees in perpetual verdure. The chief of those rivers bears the name of the *lime-marigot* : it is large, and very full of fish, abounding especially with fine eels, carp, and *macheirans*. The latter is a very good fish, and extremely fat; but it is dangerous while alive, being armed on the two fins of each side, and on that of the back, with a very sharp dart, wherewith it wounds

Fish called
macheiran.

wounds those who attempt to catch it. These wounds are venomous, and difficult to cure.

1752.
August.

Going ashore on the south side of this *marigot*, I found myself on a bank of shells, where a number of lime-kilns had been dug very near the sea-side. This bank, tho' bare of earth, was covered with a very thick wood; there were even some calabash-trees of above three feet diameter. I kept walking among the shells as far as the village called Montel, which is more than half a league from thence southward; and I came back another way, in order to discover the breadth of it. What diverted me most in this expedition was, to see the manner in which one of my negroes killed a crocodile seven feet long. Having spied this animal asleep among brambles, at the foot of a tree that grew near the bank of a river, approached so softly as not to awake him, and then struck him very dexterously with

Bank of
shells.

Hunting the
crocodile.

1752.
August.

with his knife in that part of the neck where there are no bones nor scales, and pierced him nearly quite through. The animal, mortally wounded, and curling himself, tho' with some difficulty, hit the negroe on the legs with the end of his tail; and such was the violence of the blow, that he laid him flat upon the ground. The latter, without letting go his hold, rose up again immediately; and, that he might have nothing to fear from the crocodile's devouring jaw, he enwrapped it with a *paan*, while his comrade held the tail, and I got upon his body in order to keep him down. Then the negroe drew out his knife again, and cut off the head quite clean from the body. This expedition was soon over. The negroes did all they could to drag the body of the crocodile as far as the vessel; for it was too heavy for them to carry; but finding their endeavours ineffectual, they got it into a boat in order to put it on board. By this exploit my negroe acquired high applause from all the *laptots* of the vessel,

and from the neighbouring inhabitants, who had been long acquainted with his dexterity in hunting the crocodile. They did honour to their prey; for that very evening they eat several slices of it. I tasted some, which to me did not appear to have so strong a scent of musk, as it is generally said to have, and I found it tolerable good eating.

1752.
August.

Its flesh is
eaten.

The day following I made an excursion on the other side the *lime-marigot*, and was not a little surprised to find a great number of hills of red sand upwards of thirty feet high. The **néous*, the **dethars*, and several other fruit-trees, gave undoubted proofs of the fecundity of this soil: I saw chameleons on every shrub, and when they were touched, they changed from a green colour into black. They had fine sport at that time in hunting of grass-hoppers, with which the earth was in some measure covered: for it is a

* New species of trees never yet described.

1752.
August.

mistake to imagine that this animal does not eat. Let not its meagre body impose on us : as many as I found had their stomachs filled with butter-flies, and especially with grass-hoppers; which shews that they do not fast so rigidly as the vulgar formerly imagined : but this is not the only error from which they ought to be set free.

Opinion of
the negroes
in regard to
the forma-
tion of the
banks of
shells.

To return to the banks of oyster-shells which cover the lime-fields upwards of half a league; the negroes have also their prejudices. Some of them tell us that this bank was the work of monkeys in former ages; and that these animals, being then more numerous than they are at present, eat up those oysters. Others will have them to be the shells of oysters which their fore-fathers smoke-dried, as they themselves used to do, not a great many years ago, when the mangroves of this river furnished them with wood, as those of the river Gambia do, to this very day. The

1752.
August.

French, who have examined these banks, and heard the reasonings of the negroes in regard to their formation, are of the latter opinion. But even were we to grant both these points, still they will be puzzled to account how these shells should be arranged thus in the regular manner we find them, without any intermixture. Besides, the quantity of oysters that could be shelled and dried in a day, is so very small in comparison to the immense heap of shells in question, and would suppose such a series of ages to form this bank, that the thing loseth all probability in the supputation. Without having recourse to such precarious proofs, in order to explain in what manner this and such other heaps of shells have been formed, we have only to reflect on what passeth in the river Gambia, where the oysters considerably multiply on the roots of mangroves, and in several parts have formed very high banks of shells: and we shall have reason to believe, that these spots were formerly the beds of rivers, where

1752.
August.

where the oyſters alſo lived on mangroves ; that theſe beds ſucceſſively changed place, and that the ſea retiring left theſe banks bare, and upon a level, eight or ten feet above its ſurface.

Return to
the iſland of
Senegal.

The 23d I returned to the iſland of Senegal in my *pirogue* : though it was very light and tottering, yet I choſe rather to make uſe of it, than to wait for the conveniency of the veſſel that had brought me from thence. My negroes ſtrove who ſhould ſwim the faſteſt, and reconducted me, in leſs than two hours, two leagues and a half, which is the diſtance from the lime-kiln to the iſland of Senegal. Notwithſtanding the roughneſs of the water, and a ſtrong guſt of wind which blew from the eaſt as we got out of the *marigot* ; yet not a ſingle wave broke in upon us, nor did we perceive the leaſt ſprinkling, becauſe we were ſheltered under the mangroves. The wind was now quite down, and there were only a few large waves here and there, when a *pirogue* put off
to

1752.

August.

Pirogue
overfet.

to crofs the river: the *piroque* was fmall, and had three men in it; two of them rowed with a paddle, during which exercife they fung a kind of fong, the burden of which I heard at a great diftance, and it was not difagreeable. The negroe, who fteered with his paddle, was probably in the fault; or elfe he, who was employed in the middle to empty the water which entered the *piroque*, muft have inclined too much on one fide, and deftroyed its æquilibrium; or whatever other caufe it might be, the boat overfet, with the negroes in it. Though they were very active fellows, they had all the difficulty in the world to fet it right again: yet, at length, by pushing it backwards and forwards, and ftill continuing to fwim, they emptied the water out of it, and got into it once more. In any other circumftance it would have been a diverfion to fee their manner of acting, as well as the dexterity and ftrength with which they extricated themfelves out of danger; and it may

T

be

1752.
August.

be said, that they succeeded extremely well. This accident is not uncommon ; but as they are all excellent swimmers, there is no instance that any of them ever perished.

Gigantic
 serpent.

Towards the middle of the next month, I had a present made me of a young serpent of the gigantic species. This present gave me great pleasure, because it was the first of the kind that I had seen ; and I have still preserved the skin of it intire in my cabinet. It had been lately caught in the *marigot* of the island of Senegal, and was yet quite alive. The length of it was three feet and some what more : its colour was a yellow livid ground, with a large blackish band all along its back, on which were scattered a few yellow irregular spots. There was a glossiness over its whole body, which gave it a smooth polish as if it was varnished. Its head was neither flat nor triangular like that of a viper, but round and somewhat long. This serpent, small as it was,

gave

1752.

August.

gave me a sufficient idea to distinguish it from all the other species; yet it was only an imperfect representation of the large ones, of which I should never have formed an adequate notion, if a little while after they had not brought me, at different times, two of a middling size, the largest of which was twenty-two feet and a few inches long, and eight inches broad. The colour of its skin was a dark grey, with a few yellowish lines not very apparent: the skin, stretched out, was from five and twenty to six and twenty inches broad. They left it with me intire, with a slice of its flesh, the remainder of which was to serve as a regale for several days, to the person who caught it, together with the rest of the village. The head, which was still to it, was of the same size as that of a crocodile from five to six feet; its teeth were upwards of half an inch long, strong and sharp; and its throat was more than wide enough to swallow a hare, or even a pretty large dog, without having any occasion to chew it.

1752.
September.

Size of the
largest.

By seeing those two serpents, which, according to the testimony of my negroes and of all those who had beheld great numbers of them, were but of an indifferent size, I had no longer the least room to doubt of the truth of what I had heard a thousand times in that country, and which I had always looked upon as a fable. Even the negroes themselves, to whom I was indebted for these, assured me, that I had seen nothing extraordinary, and that it was not unusual to meet with some, within a few leagues east of the island of Senegal, as large and as long as the mast of a common ship. The people of Bissao told me, they had seen some in their country, that were a great deal longer than masts. It was not difficult for me to judge, by comparing their accounts to the serpents I had before me, that the largest of that species, upon a just computation, must be from forty to fifty feet long, and from one foot to one and a half broad.

The

The manner in which this animal seeks his prey, is not less extraordinary than his enormous size. He lurks in morasses and places not far from the water. His tail is curled two or three rounds of a circle, which include a circumference from five to six feet diameter, over which he rears his head with part of his body. In this attitude, and as it were immoveable, he throws his eyes all round, and when he perceives an animal within reach, he darts upon it by means of the circumvolutions of his tail, which have the same effect as a strong spring. If the animal he has seized is too large to be swallowed up entire, (as for instance, an ox, an antelope, or a large African ram) after giving it a few bites with his destructive teeth, he crushes and breaks its bones, either by squeezing it with a few twists, or by pressing it with the weight of his whole body, which he slides over it; then he takes it up again into his mouth, and covers it with a frothy spittle, to render it more easy to swallow without chewing; for he has this in com-

1752.
September.

The manner
in which
they seek
their prey.

1752.
September.

mon with a great many more serpents and lizards, which never chew their food, but swallow it up intire.

Their use.

This monster, terrible as he may seem by his size and strength, does not make the ravage that one would naturally imagine. He is easily discovered, by reason of his voluminous size, from whence ariseth the security of animals weaker than himself. His body, wreathed in spiral curls, appears at a great distance like the brink of a well; and this is warning enough to travellers, and even to the cattle themselves, to turn another way. We never hear that he attacks the human species; at least, examples of this sort are very rare. Besides the hunting of large animals, such as horses, oxen, stags, and other the like quadrupedes, whose safety depends upon their legs, is not very agreeable to him, either because he finds it too troublesome, or it is not so sure, or their flesh is not agreeable to his palate. He is much better pleased with devouring other lesser serpents,

2

lizards,

1752.
October.

lizards, and especially toads and locusts, which seem to rise in clouds in this country, only to satisfy his all-devouring jaws. Upon the whole, it may be said of these serpents, that they do more good than harm, since they cleanse the earth of an innumerable number of noxious insects and reptiles, which would otherwise oblige the inhabitants to desert those fruitful countries, where they are now settled: so that it is the interest of the negroes, to suffer those monsters to live unmolested.

But to resume the thread of my narration: The necessity I was under of returning ten times to the same places, and in different seasons, gave me an opportunity, the 12th of the month of October, of discovering a thing which was very remote from my thoughts. Crossing, at least the twentieth time, the Wood island, in order to reach the village of Kionk, I perceived several small fishes in morasses formed by rain-water. They were all of the same species; and, by their lively red, I knew them

to

12 October.

Excursion
to the Wood
island.

Roaches.

1752.

October.

to be the lesser kind of roaches. The rains had subsided, and the water was beginning to dry up in those ponds; a sure sign that the fish were not long-lived. They must have died very soon, for I saw the ground two days after, when the waters were dried up. One would imagine, that the species was lost for ever in regard to that particular spot; but, far from it, the next year new ones appeared, intirely like those of the preceding years. Here is a fact the more worthy of notice, as it does not appear by what means the fish could be conveyed to that place; for, on the one hand, the ponds, though deep, have no communication with the waters of the Niger, which is about three hundred fathoms from thence; and besides, this species of fish is unknown to that river: so that it cannot be supposed, that any of the aquatic birds should bring away the eggs. Surely, no body will pretend to say, that the roaches lay their eggs every year in the bottom of those ponds, where they are preserved during the nine months
of

of drought, till the return of the rain; because the same difficulty would still subsist in regard to the origin of the first. It would be at least equally absurd to imagine, that their seeds were conveyed to other places by vapours, which, as they fell down, scattered them here and there into different basons.

1752.
October.

I stopped on this morass no longer than was necessary to cross it, because it was very late. Thence I proceeded to a fine country, where in the midst of a prodigious quantity of uncommon plants, the *narcissus ceylanicus* * distinguished itself, as well by its agreeable flavour, as by the whiteness of its flowers. I arrived at Kionk just as the night came on, which the musketoes made me pass very disagreeably. Notwithstanding all the precautions which the governor of the village had taken to screen me from their pursuits, by making me lodge in one of his own huts, newly plaistered with mud and cow dung, and

He arrives at
the village of
Kionk.

Inconveni-
ency from
the muske-
toes.

filling

* *Narcissus ceylanicus*, flore albo hexagono odorato.
Comm. Hort. Amst. vol. I. pag. 75. tab. 39.

1752.
October.

filling it all night with smoke; still there entered a sufficient number of those noisome insects to drive me almost mad. This, together with the stink of the dung and the smoke, insupportable to any other of the human species but negroes, obliged me to decamp. I ran all over the village from hut to hut, to look for better quarters. Whereever I entered, I found the beds all full: without regard to sex, age, kindred, or condition, they all lay promiscuously side by side, sometimes five or six, and even eight in the same bed, naked as they came out of their mother's womb. But what surprized me the most was, the profound quiet with which they slept in the midst of so thick a smoke, that one would imagine it must have suffocated them. In short, after rambling about a good deal, I had no other resource left, than to lay myself down in the open air on two mats, extended between two fires: and even here, the musketoes made me pay very dear for a few moments of rest.

The negroes
lie promiscuously.

With

With impatience I waited for day; and as soon as it began to peep, the lord of the village, desirous of diverting me with a walk, conducted me into his gardens. The whole neighbourhood was very agreeable; the fallow grounds formed large meadows, checkered with mangroves and calabash-trees, which made a delightful landscape. At that time the small millet, which the negroes live upon, and which in their language they call *dougoup-nioul* *, shewed its golden ears. The grain was almost ripe, and drew an infinite number of birds, that made a vast havock. In order to scare them away, the inhabitants had crossed their *lougans* with a great number of threads, to which they hung shells, bones, and other such bodies, that are apt to make a noise upon the least collision. The whole was to be put in motion by four cords, which were stretched to four corners of the field, where just as many women or children kept watch upon sheds or covered plat-

1752.
October.

Field of
smallmillet.

Industry of
the negroes
in keeping
off the birds.

* *Panicum Indicum*, spicâ longissimâ. *C. B. Pin. pag. 27.*

forms,

1752.
October.

forms, from seven to eight feet high, and each of them drew a cord, as soon as they saw the birds come near. Besides this noise, they made a loud hollowing, and kept clapping their hands. This watch was to continue till the millet was fit to cut; yet in spite of all their care and vigilance, they were often deceived by the feathered plunderers. Small *bengalis*, black and red sparrows, and other pretty birds, which change their colour once a year, and which the French call *senegalis*, flocked thither every morning in vast numbers. But the most terrible scourge of all was a large species of yellow and black sparrows, clouds of which fell like hail upon the grain; and when they had spread desolation in one quarter, they flew to another. Let their stay be never so short, and very often before the negroes had time to put their scare-crow in motion, these birds did irreparable mischief. I have read in some relation, that the Ægyptians have no other remedy; but either they must sow more grain, or the destructive

Clouds of
sparrows.

tive sparrows must be less numerous in their country, since we do not hear, that they occasion famines so frequently as among our negroes.

1752.
October.

Near those fields of millet there were *lougans* of cotton, indigo, tobacco, water-melons, French-beans, and other legumes. Each of them was inclosed with a hedge of brambles, with which was entwined a species of wild cucumber, known in the country by the name of *moi-moi* *. This plant was loaded with a small fruit, which is of a fine coral red when it comes to full maturity; and some of it had been plundered by the serpents, lizards, and birds. My people perceiving the fruit, gathered a good deal of it, which they presented to me, after tasting of it themselves. I had known it a long time; and had seen the people of the country eat of it often; nay I had several times eat as many as a dozen, to quench my thirst in the violent heats, without ever feeling any bad consequence,

Moi-moi a
species of
wild
cucumber.

* *Bryonia folio anguloso acuto glabro. Burm. Thes. Zeyl. pag. 48. tab. 19. fig. 1.*

1752.
October.

Terrible effect of this plant.

sequence, or the least inconveniency: but that day I thought proper to eat a much larger quantity of it. I dined towards noon with a very good appetite; and I likewise supped without feeling any bad symptom. It was not till nine o'clock that this fruit began to operate, when I was suddenly seized with a suffocating, or stoppage of breath; afterwards it worked me as violently as any emetic I ever took in my life; and this operation lasted near eight hours. One of my negroes, who was twenty years of age, and who had eaten more plentifully of this fruit than I, was seized in like manner towards midnight; but did not get off so cheap. This emetic continued to work him above four and twenty hours, with such violence, that he did not know whereabouts he was all the time; and it had like to have cost him his life. Had such an experiment been made on purpose, I do not think a more favourable success could be expected from it: and what is most remarkable, each suffered in proportion to the
the

the quantity he had eaten of this fruit ; but it had no effect at all on him who eat only a dozen ; and even he who suffered most by it, was as well two days after, as if he had not been ill at all.

1752.
October.

Tired with going thro' so many hardships at Kionk, I returned to the island of Senegal, where I arrived time enough to be present at the feast of the *tabaske*. The Mahometans, of the sect of Sina-Ali, founded this feast to commemorate the nativity of their prophet : it falls yearly towards the middle of the October moon ; and this year it was celebrated the 18th. The whole day was spent in feasting and merriment, during which time the saint, in whose honour the festival had been instituted, seemed to be very remote from their thoughts. It ended with a general dance in the *savana*, over-against the forts, whither people of all ages and sexes repaired. The ball was opened at four in the afternoon, with tabor and pipe and vocal music. The young people, in
their

Feast of the
Tabaske.

General
dance.

1752.

October.

their gayest array, displayed their several abilities in this kind of diversion. When they had tired themselves for two hours, in dancing according to the manner of the country, that is, in postures and movements the most indecent, and most opposite to our ideas of modesty and shame, the scene varied: they made a large circle, to give place to lords and persons of distinction, who were mounted on horses magnificently caparisoned. Nothing could be more entertaining than to see those proud couriers, forgetting their mettle and fire, and conforming to the intent of the festival: they raised their feet, and touched the ground lightly and in cadence; all the movements of their bodies exactly accorded with the sound of the instruments; in a word, their gestures bore a perfect resemblance to a most regular dance. The festival seemed to be intended for them only, so greatly were they affected with it, and so sensible of applause. I do not think there can be a nobler sight than that of horses trained to this exercise,
and

and especially of such fine beautiful creatures as our Arabian horses of Senegal. The horsemen themselves greatly added to those sports; for they managed their horses, and made them imitate whatever they pleased, feigning by their gesture and attitude, sometimes a combat, and other times a juggling, a chase, or dance. The spectators, wrapped in admiration, were displeased at the too rapid approach of night, which put an end to amusements, where nought was heard but joy, festivity, and mirth.

1752.
October.

A journey over land from the island of Senegal to *la Chaux*, or the *lime-kiln*, was likely to give me a further knowledge of a country, that had pleased me so greatly at my first visit. I undertook it the 4th of November: my *pirogue* carried me a league and a quarter by water, as far as the port of Galel, where I went ashore, intending to walk to the village of the same name, about five hundred fathoms

4th of November.
Journey over land to *la Chaux*.

U

thoms

1752.
November.

Scorching
east wind.

thorns from the river side. The way was over barren sands, and that day was remarkable for one of the sultriest east winds that had been ever felt in this season: but the heat I endured in travelling over those sands was nothing, when compared to what I suffered in the road to the lime-kiln.

Difficulty of
travelling
during those
winds.

I had now a long league to reach that place. In setting out I went over a sandy disagreeable plain, where, among other spinous shrubs that are fond of a very dry soil, I met with what the Jallofs call the *niotoutt*: it has a good deal of that resinous gum, known by the name of *bdellium*; and its branches serve for a *sokiou*, that is, for a tooth-picker to the women of the country. Though the sun had not yet reached the meridian, the sands were all on fire; and my shoes were soon cracked and burnt with the scorching heat. At any other time I should have moistened those burnings sands with drops of sweat; but the east wind is naturally so parching,
that

1752.
November.

that notwithstanding the violent heat of the air and the sun, my skin was dried up, before the sweat had time to shew itself. I had violent prickings over all my body; and the blood oftentimes opened itself a passage through my pores, which the sweat could not pervade. My negroes were no longer of a black complexion, but as red as copper: they were tormented with thirst, the inseparable companion of parching heat, which obliged them to hang out their tongues, in order to breathe more freely. I was as thirsty as they; and I may venture to affirm, that this is one of the greatest miseries a person is exposed to in these scorching plains, where there is not a drop of water to be had. No doubt but it would have been very great relief to us, almost perishing with thirst, and broiled in the sun: but the inhabitants of that country are not like those of more temperate climates; they keep no reservoirs of water on the high roads for the accommodation of travellers.

1752.
November.

Crabs with
monstrous
large claws.

After having walked an hour over those sands, exposed to the scorching rays of the sun, I came to a dry meadow, full of thick rushes, from three to four feet high, which greatly tried my patience. What little water there was, I found it saltish, stagnated, and spoilt by crabs. Never did I behold such a sight of those animals as on this very spot: some were red, others dark grey, with such prodigious claws, that they could easily span my leg, without squeezing it. In fine, this continued forest of rushes (for I met with nothing else for the space of half a league) brought me as far as the lime bank.

He dines
under the
trees.

I was so tired that I wanted to rest myself: for which reason I staid here some time, and dined under the trees, with a few provisions and a water-melon, which I had brought with me from Galel. This is a very wholesome fruit, especially after repast; and I have often eat for my own dessert, from five to six pounds of it, with-

I

out

out any inconveniency or surfeit, though I had made a hearty dinner. While I was seated under those trees, I heard the parakites and parrots over my head; and some of the kernels of acacias and gum-trees, which they were eating, dropped down at my feet. In the mean time my negroes, who had suffered greatly by the excessive heat, were rubbing their foreheads with live toads, a few of which they found under the briars: this is their usual remedy, when they are afflicted with a megrim or dizziness; and it gave them relief. I suffered as much from the same complaint as they, and should readily have followed their example: but the want of being used to those animals, together with an almost invincible repugnance, which I look upon as natural to every body that has not been accustomed to handle them, hindered me from having recourse to this innocent and wholesome remedy.

1752.
November.

Toads are a
good cure
for dizziness.

I came back the same way I went to the lime-kiln, for there is no other. In

1752.
November.

Birds of the
lime mea-
dow.

the meadow I killed a *flamant* *, and a bustard of a different species from the European: it differs in the colour of its feathers, which are generally of a dark grey; its neck is also very long; and, like the lark, it has a kind of tuft on the back part of its head. The French in that country call it a flying-ostrich: whether this name suits it or not, this is not a fit place to examine; it may be said, however, that the above bird resembles an ostrich in many respects.

The negroes
burn their
lands.

It was very late when I passed within sight of Galel; and the negroes had set fire to the herbs and brambles as well to render the country passable, as to prepare it for being sown the next year. Thus the heat of nocturnal fire succeeded to that of the sun; and I walked by the light thereof as far as the port, where I embarked for the island of Senegal. There I arrived so fatigued and ex-

* *Phœnicopterus Bahamensis*. *Catesby*, vol. 1. tab. 73
& 74.

hausted, which was also the case with my negroes, that I do not think I ever stood more in need of repose in my whole life.

1754.
November.

In this and every expedition I made since the month of June, my principal view was to acquire some knowledge of the plantations of indigo. I was curious to know what quantity and quality the negroes sow in the neighbourhood of the island of Senegal, because I had a mind to repeat some experiments, which I had imparted in proper time to the East-India Company. Those people do not take much pains to draw the die out of this plant: they are satisfied with gathering the leaves at any time of the year, with pounding them in a mortar to reduce them to a paste, and with making them up into loaves, in order to preserve them dry. When they want to make use of them, they dissolve them in a kind of lye, made of the ashes of an unctuous plant which grows in their fields, and

Manner in
which they
prepare their
indigo.

1752.
November.

by them is called *rhémé* *. This dissolution imbibes a tincture of the indigo, into which they dip their linen cold, as often as they think necessary, according to the deepness of the colour.

Cacrelats.

I know what sympathy there is between the *cacrelats* and indigo; but, as often as I happened to leave a bundle of this plant in my room in the night time, I was sure to find some hundreds of those insects lodged in it the next day; and it seemed as if they were all got together. They are as troublesome as they are common in the island of Senegal. Though they are scarce an inch thick, they do an incredible deal of mischief. They gnaw linen, sheets, wood, paper, books, and, in short, whatever comes in their way: they attack even the aloes, the bitterness of which keeps off all other insects. They are likewise very disagreeable by the stench that comes from their bodies; and they

Inconveni-
ency of
those in-
sects.

* *Portulaca marina latifolia, flore suave rubenti.*
Plum. Cat. pag. 6.

are

1752.
November

are most horrid enemies to the persons with whom they take up their quarters; for they never stir out till night, then they hover round the room, and make as great a noise as if there was large cage full of birds. In short, the *cacrelat* multiplies so fast, that it would be a most dangerous insect, had it not a great number of enemies.

Those it has the most reason to be afraid of, are the spider and the *sourd*: the latter is a species of lizard, said to be venomous, and as lickerish after the *cacrelat* as the spider. They both reside in bed-chambers as well as that insect, and are at continual war with it; which secures the tranquillity of those with whom they have once taken up their quarters. The hedge-hog likewise persecutes it: that of Senegal differs from the European in size only: it passes, like the latter, some part of the low season, that is of the cold and dry season, in a species of lethargy, during

1752.
November.

ing which it abstains from nourishment, rarely going abroad in search of any; but it knows very well how to repair this loss in the summer nights. I kept one for above three years in my chamber, where it did me immense service, by freeing me from spiders, *cacrelats*, *sourds*, ants, and other insects, with which the room had been infested. The hedge-hog is exceeding good eating, and very tender, especially if you take it, about the time when it begins to enter into its lethargic sleep.

Sand-fleas.

Another inconveniency, especially during the winter or low season, are the sand-fleas, which are so called because they lodge in the sand of inhabited huts. These are so full of them, that as soon as you set foot therein, they cover you all over; and they are so very small, that you can perceive them only by their numbers. They do not bite hard; yet, when there are great multitudes of them, they produce an itching or stinging almost intolerable. What is most extraordinary

dinary in this insect, it never leaps or jumps higher than three or four inches: so that, when a person takes care to keep himself half a foot above ground, he is sure there is nothing to fear from that quarter.

1752.
November.

This, I believe, is the proper place, since I am upon the article of Senegal, to take notice also of some of its advantages. Tho' the heats of this climate are excessive, to such a degree, that their winter is much warmer than our summer in France, yet they are supportable. One is accustomed to them by degrees; because the air is every day refreshed with sea and land breezes, which blow alternately. The way therefore for a person to cool himself, is to catch the fanning breezes, or to take shelter within doors, when there is a thorough air, and the windows are made of fine linen.

Advantages
of the island
of Senegal.

The heats
supportable.

It

1752.

November.The sands
very fertile.

It is to these heats that they are partly indebted for the fertility of their lands. The sands of this island are converted into gardens of considerable produce. Independently of the legumes and fruits of the country, such as the Guinea *oseille*, botates, ananas, guavas, and some others, they likewise plant, in the winter season, most of the European herbs and legumes. The fig-tree, the pomegranate, and the vine, are loaded every year with excellent fruit. With a little labour and care, there is no fruit nor grain, but would grow there in great plenty: they might raise whatever they want, and generally all the necessaries of life. In short, the soil of the island of Senegal, notwithstanding its being so sandy, is yet so very fruitful, that a great many plants yield several times a year. This I saw myself in a garden which I kept on purpose for such experiments: and what without all manner of doubt will appear very surprizing, is, my having sown particular legumes, of which I had above
twelve

twelve crops the same year. But this curious detail I refer to another work.

1752.

November.

There is not perhaps a country in the world where poultry are more common. They breed turkeys, Guinea hens, geese, ducks, and a prodigious number of fowls. Their pigeons are in admirable perfection; and their hogs multiply very fast. There is also plenty of fish, and especially in the Niger, where you may catch carps with your hand. This river, besides the lamantin or sea-cow, abounds in captains,* mullets, surmulletts, soles, rays, and other excellent fish: it has also plenty of crabs and lobsters. Most of these fish come from the sea: and it is said, that when they are caught in the river it improves them; because the mixture of the fresh with the salt water makes them more delicate and tender. To all these advantages we may add the pleasure of sporting; for this island is furnished with little moor-hens,

Plenty of fowls.

Fish.

* A fish so called, because it is very red, and its fins resemble a feather: it is very like a carp, but larger.

1752.
November.

with larks, thrushes, sea-partridges, and yellow wagtails, or, to express myself better, the ortolans of the country: these are small lumps of fat, exceedingly well tasted.

The only thing wanting in the island of Senegal are walks; for they say it is too small, and too naked. They might, without doubt, have umbrageous avenues for the sake of a shady walk, were they to plant calabash-trees, and the like, which delight in moist sands: but of what use would it be, to make a harbour for the musketoes, that is, for a greater plague than the most excessive heats? Of what service would those avenues be in a country, where the time of walking is not till sun-set? Ought they to regret this loss, when they have gardens enamelled with perpetual verdure, which every day present the eye with new decorations; where such a multitude of flowers, as agreeable by their fragrant odours as by the variety of their colours, shoot up almost without
care

Pleasant
gardens.

care or culture. There you see, sweet basil of all sizes and colours, tuberoses, daffodils, asphodel-lillies; among which the night-shade, the African pink, the amaranth, and pomegranates in blossom, produce an excellent effect. The blue and gilt lizards, with butterflies and other insects, all equally beautiful, delight in coming hither to mix their different colours, and to diversify that sameness which one sees in most gardens.

1752.
November.

I had taken a plan of the Wood-island, as well as of that of Griel, the lime-kiln, the island of Sor, Bocos, and several others; and nothing further remained for me than to add the point of Barbary and the salt-pans to it: then I should have a complete map of the neighbourhood of the island of Senegal, from the village of Mouitt to the mouth of the Niger, as far as the village of Torkhod, seven leagues to the north. The desire I had of finishing a work already far advanced, and which had cost me
such

Map of the
neighbour-
hood of the
island of
Senegal.

1753.
June.

15 June.

Expedition
to the salt-
pans.

such a deal of trouble, and so many excursions over the burning sands, induced me to undertake an expedition to the salt-pans. I therefore embarked the 15th of June, 1753, on board a vessel that was going to trade there for salt. As it was well equipped, and the wind proved favourable, we soon got beyond the English island, which is only a slip of marshy land, a hundred fathoms in diameter, covered with reeds and almost impenetrable mangroves. We passed the isle of Bokos with the same quickness; and as soon as we came across the south point of the *marigot* of Del, I went on shore in order to fathom the neighbouring parts, while the vessel continued its course to the place where it was to anchor.

Small serpents very common.

Walking over the sands of this point, I met with such a multitude of serpents, that they seemed to grow wherever I trod: fortunately for me they were neither large nor venomous, being hardly so big as one's little finger; so that their
bite

1753.
June.

bite could not be dangerous. These sands brought me to the salt-pans, which were two thirds of a league from the *marigot*: they are a kind of morafs, from two to three hundred fathoms long, and one third broad, filled with a salt water extremely sharp. It is so impregnated with salt, as to yield one third of its quantity, and rather more; and, when congealed, it covers the bottom with a thick solid crust. The negroes enter up to the knee, and oftentimes deeper, into this water, which may be said almost to boil with the heat of the sun. They are provided with stakes of hard wood, with which they break the salt; and afterwards they carry it to the river side, where the French traffick with them. This salt is generally so white as to dazzle the eye: some of it is also of a carnation colour: but it has always a bitter sharpness, disagreeable to the taste; and it is this corrosive quality, that renders it not so proper for salting of fresh meat and fish.

Salt-pans.

1753.
June.

They have
no commu-
nication
with the
sea.

One would imagine, that these salt morasses have some communication with the sea. I had been of this opinion, before I visited the spot; but then I perceived the impossibility of it. They are separated from the Niger by a neck of land, of above five hundred fathoms, where a chain of sand-hills riseth, which neither the waters of the river, nor even those of the sea, when most tempestuous, do ever reach. The survey I took of this ground that day, convinced me further, that the bottom of this morass is higher than the surface of the river: whence I concluded, that we must trace the origin of this salt, which is every year produced in such abundance, up to some other cause than the actual communication of the sea-water.

The author
is sure of it
by survey-
ing.

When I had examined the salt-pans, and finished all my surveying, I went to the trading place called by the name of Piquet, where the exchange of goods was to be made, and opposite to which the vessel
had

1753.
June.

had anchored. The agent for this business had already caused a tent to be pitched upon the shore, and some huts to be built of leaves of trees, under which we were to lie. The negroe lord, master of the salt-pans, otherwise called *korom-assou*, or *kram-assou*, having notice of his arrival, came to pay him a visit. He seemed to be about forty; was large, and well made: his complexion was not a deep black, but with a little tincture of red: he had a noble air, though not handsome; a quick conception; an easy carriage, and a soft agreeable tone of voice: he explained himself very well, and with gravity. After half an hour's conversation, when he had agreed with the agent, he conducted us a quarter of a league off to the village of Guebenn, of which he was governor. There he received us very civilly, and even with a politeness which one could hardly have expected from a man of his colour. He gave us a collation of new milk, palm wine, *icaque* plumbs, called *ourai*, and other fruits of

Description
of the lord
of the salt-
pans.

Manner in
which he
receives the
author.

1753.
June.

the country. He had summoned all the young people of the village to give us a ball; and accordingly they attended us, dancing to vocal and instrumental musick, as far as the trading place, where they continued these sports till midnight. Dancing is the favourite entertainment of the negroes; they sometimes bring young children with them that can hardly stand: one would be apt to say, that they are born dancing, to see the exactness of their movements. The same amusements were renewed every evening. In short, this good man did all he could to procure us diversion; and this was not a small comfort to us in so desert and forlorn a place.

Village of
Mouitt.

The next day I went to reconnoitre the neighbourhood of Mouitt, which is within two thirds of a league to the southward of Piquet. It is a pretty large trading village, advantageously situate on a hill well planted with calabash-trees, and wild figs, of a
very

1753.
June.

very great height ; the latter bear a strong resemblance to the sycamore of the ancients. By the way I passed near a great number of small salt-pans, full of a strong red salt, infinitely more sharp and more corrosive than that of the large salt-pans of Guebenn. I likewise met with foxes, antelopes, and the footsteps of wild boars and wolves lately imprinted on the sand : but the shooting of those animals, with which I was well acquainted, did not tempt me so much as that of certain blackbirds, which I descried eastward of the village. They were so like a turkey, both as to size and feathers, that one might very easily mistake them. I killed two with the same shot, one male, and the other female. They had both a kind of black hollow helmet on the head, of the same bulk and figure as that of the *casoar* : upon their neck they had a long plate like a very bright velum, which was red in the male, and blue in the female. This bird might be the *gallinache* of the Portuguese, or what

Sacredbirds.

1753.

June.

the French in the American islands call *marchan*; but the negroes give it the name of *guinar*. The inhabitants of this neighbourhood look upon it as a *marabou*, that is, as a sacred animal; perhaps, because it generally lives longer than the small serpents, so common in the neighbourhood, and for which the negroes have a superstitious veneration. They could not bear that I should be so audacious as to sacrifice their marabous to my pleasure: nay, they looked upon me as a conjurer, when I brought them to the ground with the very first shot; for they imagined those birds to be invulnerable. They carried their superstition so far, as to tell me, that I should infallibly die on my journey, for having committed so heinous a crime.

This action did not gain me the esteem of the inhabitants of Mouitt: however, I got away from thence without any harm, and continued my journey towards the village
of

of Guioel and Guebenn, where I found shrubs, called *foudenn* in the country: it is a kind of *alkanna* *, the leaves of which are used by the negroe men and women to give a red die to their nails and they never lose this colour, till they come to grow again. From thence I continued my journey as far as the village of Del, and then I returned to the trading-place. The banks of the Niger were at that time covered in this spot with a small kind of fish, scarce so large as half a goose quill: they were white and transparent as crystal, and each side of them was marked with a narrow silver line.

1753.
June.

Foudenn, a shrub used in the country to die their nails.

After spending three days at the salt-pans of Guebenn, I set out from thence the 18th in the evening, and returned to the island of Senegal, directing my course

Plan of the coast of Barbary.

* *Ligustrum Ægyptium*, el henne vel tamar-endi. *P. Alp. Ægyp. pag. 23.*

1753.
June.

by the point of Barbary, in order to be able to settle it in my map. I travelled very near three leagues on foot, coasting its sands through all their windings, from the bar upon the western bank of the Niger, as far as the village of Gueutt, which is parallel to the middle of the island of Senegal. My canoe followed me along shore, and kept as near to land as possible, in order to take me in, if I should happen to be stopped by a rivulet, or by any of those thickets of tamarisk and fanar, which are scattered upon the coast. All the way I saw nothing but yellow crabs, which covered the earth in such a manner, that sometimes I went over plains of above fifty fathoms, without being able to discover one foot of bare ground. On those white sands the sea bind-weed * expanding its purple flowers, amidst the agreeable verdure of its trailing stalks, formed all-

* *Convolvulus marinus catharticus*, folio rotundo, flore purpurco. *Plum. Plant. de l'Amerique*, pag. 89, *pla.* 104.

together

1753.
June.Plants that
grow there.

together an admirable embroidery. The shrubs I saw there were a few tamarisks, the *beidel-offar* *, the paretuiver †, the sanar ‡, the spartium ‡, the conocarpus ||; and great numbers of *lobelia* ¶, and *icaque* §. The latter is a receptacle for a kind of red ants, which lodge in its branches: among the leaves they form a kind of nest, from whence they assail those who are so imprudent as to draw near to gather the fruit; and they bite them most unmercifully. I could not escape those insects, as I had a good deal of the wood to traverse. There was something so venomous in their sting, that my face and hands were covered with blisters, as if they had been scalded: the pain was not assuaged, till I got thoroughly wet with

* Beidel-offar. *P. Alp. Ægyp. pag. 85.*

† Trees which have not been yet described.

‡ Spartium scandens, citreis foliis, floribus albis, ad nodos confertim nascentibus. *Plum. cat. pag. 19.*

|| Conocarpus. *Linn. hort. Cliff. pag. 485.*

¶ Lobelia frutescens, portulacæ folio. *Plum. gen. pag. 21.*

§ Icaco fructu ex albo rubescente. *Plum. gen. pag. 43.*

a heavy

1753.
June.

a heavy rain, which fell in the beginning of the night, and was attended with thunder and lightning, by the help of which I saw my way to cross the river, and got back to the island of Senegal.

The author
thinks of re-
turning to
France.

As soon as I arrived there, I began to think of returning to France. I had been absent from home upwards of four years; and during that time I had had occasion to make as numerous a series of observations, as could reasonably be expected in the settlement of Senegal: at least, if there were any more remaining, they were only such as might be deemed a mere matter of curiosity, or generally escape the eye of even the most clear-sighted, or require too long a stay to finish. These considerations were sufficient to determine me; and as several vessels were expected that very same month, I resolved to embrace that opportunity.

Though I had sent yearly into France to Messieurs de Reaumur and de Jussieu, a great number of animals, birds, fishes, insects,

1753.
June.

insects, herbs, seeds of plants, and other productions of the country, according as they fell in my way; yet I was sensible that many things were still wanting, especially several trees and shrubs which had never yet been seen in Europe, not even in the king's gardens. Being apprized of the particular encouragement his majesty vouchsafes to give to botanists, and excited moreover by the orders of the Duke d'Ayen, which I received by means of M. B. de Jussieu, I thought my honour concerned, as a naturalist, not to return to France, without bringing along with me the most remarkable plants that grow in the scorching climate of Senegal, to add them to those which his majesty has collected, from both hemispheres, and which are preserved with such taste and magnificence in the green-houses at Trianon, Choisi, and Paris.

With this view I resolved to take one trip more to Podor; and accordingly I set
out

10th of July,
third voyage
to Podor.

1753.
July.

Shooting of
green mon-
keys.

out the tenth of July with a favourable wind. Since I had been in the country, I had never seen but two European plants, the tamarisk and purslane: and this third expedition gave me an opportunity to observe, that of all the trees which line the banks of the Niger, there is not an eighth part, but what are of a very hard spinous wood, chiefly acacias, taller and slenderer in proportion as they are more remote from the sea coast. But what struck me most, was the shooting of monkeys, which I enjoyed within six leagues this side of Podor, on the lands to the south of Donai, otherwise called Coq; and I do not think there ever was better sport. The vessel being obliged to stay there one morning, I went on shore, to divert myself with my gun. The place was very woody, and full of green monkeys, which I did not perceive but by their breaking the boughs on the tops of the trees, from whence they tumbled down upon me: for
in

1753.
July.

in other respects they were so silent, and nimble in their tricks, that it would have been difficult to hear them. Here I stopped, and killed two or three of them, before the others seemed to be much frightened: however, when they found themselves wounded, they began to look for shelter; some by hiding themselves among the large boughs; others by coming down upon the ground; others, in fine, and these were the greatest number, by jumping from one tree to another. Nothing could be more entertaining, when several of them jumped together on the same bough, than to see it bend under them, and the hithermost to drop down to the ground, while the rest got further on, and others were still suspended in the air. As this game was going on, I continued still to shoot at them: and though I killed no less than three and twenty in less than an hour, and within the space of twenty fathoms, yet not one of them screeched the whole time, notwithstanding

1753.
July.

withstanding that they united in companies, knit their brows, gnashed their teeth, and seemed as if they intended to attack me.

My first care, upon my arrival at Podor, was to gather as many plants as possible for the king's garden; and I had great success in collecting and putting into two large chests three hundred different trees, before I left the factory: for the last time I went a shooting, upon my return to the neighbourhood of Bokol, which was on the second of August, by walking in the heat of the sun, I had been seized with a burning fever, of that malignant sort which carries off most Europeans in less than two days. Thus this voyage proved more dangerous to me, than all my former expeditions and fatigues, in the space of four years, during which time I never had the least illness. I was three days without any assistance, before I arrived at the island of Senegal, where I struggled with the distemper a whole month; and

2d of August, the author is seized with a burning fever.

and after a relapse, which brought me within an inch of my grave, at length I totally recovered. My youth, and a sound constitution, which had never been hurt by debauch, together with the generous assistance of the tenderest of friends *, preserved my life.

1753.
August.

Of all the vessels that came this year upon the coast, there was only one left, with which I could return to France. I went on board her in a state of convalescence, after passing the bar the sixth time, and we weighed from the road of Senegal the 6th of September. The contrary winds, which prevail at that time of the year, did not promise us a short voyage; and as they blew from the north and north-east, we could not stretch northward, but were constantly obliged to bear to the west. Upon our way, within ten leagues of the islands of Cape Verd, perceiving a very white sea, we sounded a hundred fathoms or more, without finding any

6th of September, he sets sail for France.

* M. Andriot, whom I have already mentioned.

bottom :

1753.
September.

bottom: after which the sea having resumed its usual colour, we imagined we had passed over a white sand-bank, which the Dutch charts mark at eighty fathoms.

He is be-
calmed.

At a time when we were within two hundred leagues of the coast, between the 17th and 18th degree of latitude, a calm came on, which lasted almost fifteen days, with suffocating heats: it was so still, that the ship did not seem to change situation, though the current had carried us a great way southward. This was the properest place in the world to find the sea water in its full saltness; since we were at sufficient distance from land, to be under no apprehension that the river waters could communicate any of their freshness to it; I therefore filled a bottle, which I sealed hermetically, with an intention of making an analysis of it at my return to France.

There is nothing more tiresome than to be in a vessel becalmed; and nothing

1753.

September.

more dreadful than to be far out at sea, when provisions begin to fall short. We made use of this unlucky accident to catch some fish, and were very much in the right; for the small quantity of fresh provisions we had taken in at Senegal, was consumed; so that we were now reduced to salt meat, and likely to be still a long at sea.

At that time there was great plenty of requiens, bonites, grand oreilles, and goldennis: the three latter live only on flying-fish, of which they are so greedy, that if you only counterfeit one of them, by covering the hook with a little linen, and two white feathers, and let it hang at the end of a rod, or behind the stern, they will be sure to bite directly. We used no other bait; and it succeeded so well, that we took a prodigious quantity of them, part of which we salted, for fear of scarcity. The *bonite* and *grand oreille* are a middling species of tunny-fish, and have altogether the same taste: the *goldennis* is

Fishing in the open sea.

Y

somewhat

1753.
September.

somewhat inferior to them in this respect; but greatly surpasses them in beauty: and without doubt, it is the beautifullest fish in the sea. The colour of its body is a dark blue ground, which in the water appears like an azure blue, and after passing through all the gradations of green and violet, is lost in a gold lustre, diffused all round its sides, which gives it the richest dress that can possibly be imagined.

Successive
calms.

To this first calm succeeded several others, the shortest of which were from three to eight days; nor did they leave us till we had passed the 30th degree of latitude. There we had south-west winds, by the help of which we intended to put into the nearest of the Azores. This was the best thing we could do in our present situation, when we wanted both biscuit and fresh water, and the greatest part of our ship's company were unfit for service.

A few days after we descried a very high foggy land, which we found to be
the

the isle of Pico; and near it was that of Fayal. We made all the sail we could towards the latter, and entered the harbour to the eastward the 20th of October. There we cast anchor in fifteen fathoms, afterwards in nine, a sandy bottom, subject to magnetical attraction, and a bad holding ground. This is the only port in the island of Fayal; and though it seems to be sheltered by two great mountains, yet it is exposed to the north-east and south-east winds, which occasion a very rough sea, especially in autumn, and drive the ships off the coast, unless they are well moored with three and even four anchors. From the west winds it is covered by the island itself, out of which it is scooped, as it were, in a semicircle, four hundred fathoms wide, and three hundred deep. The island of Pico, which is two leagues over against it, shelters it also from the general east winds; but on the other hand, it is the cause of its being annoyed by others far more dangerous: for it reflects the south-west and north-west winds that

1753.
October.

20 October
he arrives at
the island of
Fayal.

Winds
caused by
the island of
Fayal.

1753.
October.

come towards it; and it stops the clouds, which occasion such a variation of winds. I observed during my stay at Fayal, and the inhabitants assured me, they had long experienced it, that as often as the isle of Pico is darkened by a fog, it is productive of wind; and this they look upon as their most faithful anemoscope *. It is likely that this mountain has the same effect as an unelectrified body, which attracteth the clouds; whence it happens, that the ambient air, being pressed unequally on all sides, is forced to take an irregular course.

The island
of Pico.

The Pico of the Azores is hardly more than half a league in perpendicular height: when viewed from the side of Fayal, it has the form of a short cone, terminating in a sharp nipple, and is in 38 deg. 35 m. north latitude, and $3\frac{1}{2}$ deg. west longitude. This is the only mountain in the island of the same name, which may be looked upon as the vineyard plot

* An instrument which shews from what side the winds blow.

of

1753.
October.

of Fayal: for the latter depends thereon, and all its inhabitants have their country houses there, with their farms and vineyards, which they cultivate with great care. Thither they go every year to attend their vintage, which produceth two sorts of white wine, like sack, but of an inferior quality. Their malmsey is not so luscious: but the dry or table wine is almost as strong as brandy, and quickly mounts up to the head. As soon as their wines are made, they convey them in September and October to their cellars in Fayal, from whence they are exported to Brasil and some other parts of the world, by the name of wines of Fayal, though this island produceth none, and they all come from Pico.

If Fayal was not exposed to such frequent gusts of wind, it would be one of the most beautiful harbours in the world, because of the delightful prospect it affords, to those who approach it by sea. The stay we made there, be-

Beautiful
prospect of
Fayal.

1753.
October.

fore we went on shore, gave me an opportunity to view it at my full leisure. It appears like a mountain scooped into a semicircle, and divided into four or five summits, covered with trees, which descend down, as far as the sea, by a very gentle declivity. At the foot of this mountain the town winds along the port, and is surrounded with a great number of gardens, ranged one over the other in the form of an amphitheatre, which even in its irregularity affords a most charming view to the eye. The anchoring place is like that of Santa Cruz in the island of Tenerif, with this difference, that the shore is less steep, and is covered with a pretty fine sand or gravel, of a blackish colour, on which it is easier landing.

Town of
Fayal.

About the middle of the harbour there is a kind of fort, the walls of which are washed by the sea. The town comes next, and is of the same figure as the harbour: it is governed by a
Capitan

Capitan mor *, and very populous. There are five thousand inhabitants, all Portuguese, most of them ecclesiastics, and religious of both sexes; for indeed, I never saw so many convents in one town. The churches are handsome and properly maintained. There are also several good buildings, among the rest the college belonging to the Jesuits, who are temporal lords of the island. The burghers' houses are very neat, all wainscotted and inlaid, whence one may judge, that they are in no want of wood.

1753.
October.

The island of Fayal is in a fine climate: the air is very good, and preserves during the whole winter a sufficient temperature, to have no occasion for fire; and indeed they never warm themselves, nor do you see any chimney in their houses. In summer it is constantly refreshed with

Tempera-
ture of the
air,

* The following are the governor's titles, which he gave me in writing: *Signor Jeronimo de Brum da Silveira Porras Fidalgo da casa de sua Mag. e Cavaleiro Perfeccionado na Ordem de Chrysto Capitano, Maior da Capitania das Ilhas dos Affores Fayal e Pico.*

1753.
October.

breezes: for as it is situate in the middle of the sea, it is sure to receive them from what quarter soever they blow; and they render the heats supportble.

Qualities of
 the soil.

The soil is not less to be admired than the temperature of the air: as it is red and stony, and in that respect very like the soil of the isle of Pico, it would be extremely fit for producing good wines; but there is not room enough, and therefore they are satisfied with planting such things as are most necessary for life. The moisture of the mountains preserves its fertility: their tops are covered with very beautiful trees, as walnut and chesnut trees, white poplars, and especially strawberry-trees, that never lose their verdure. It is owing to the prodigious quantity of the latter in this island, that the Portuguese have given it the name of *Fayal*, which in their language signifies a strawberry-tree. The juice or moisture of the earth is wonderful, being in constant culture: it never lies idle, and yet is continually producing the several fruits of the

1753.
October.

earth. On the umbrageous hills they plant a great many roots, as potatoes and colocasia, which serve to feed their domestics. The fields are like unto so many gardens, parted from one another by dry walls, breast high: they are set aside for corn; but what little they gather, is hardly sufficient to maintain the inhabitants; who supply what is wanting with maiz, lupines, little ciches, and some other legumes, which grow better upon the side of the hill.

They have likewise a considerable dependence upon their gardens, where they cultivate a great number of fruit-trees, oranges and citrons of all sorts, pear, apple, fig, and pomegranate trees, vines, and olives, with herbs of various sorts. Melons, giromons, sweet calabashes,* and several other fruits of the earth, grow almost spontaneously.

* Cucurbita oblonga, flore albo, folio molli. C. B. Pin.
Morif. Hist. sect. 1. tab. 5. fig. 3.

There

1753.
October.

There is nothing wanting, but for the inhabitants to lay out their gardens in more order, and to dress them a little better; as they have plenty of flowers. For borders, they have a great deal of onions, thyme, lavender, sage, rosemary, sweet basil, and aromatic plants. The pink, the gilliflower, the balsam apple, the jessamin, the *balisier**, the asphodel-lillies†, the daffodils, and the tuberoſe, were in flower in the beginning of the month of November. At the ſame time the lupines, ‡ with which they had planted the hills, had ſhot out of the ground, and probably were to be ripe the month of January following.

Flocks.

It is impoſſible to find any where elſe greater plenty of cattle. They have excellent oxen, ſheep, and ſwine: they likewiſe breed all ſorts of poultry. Fiſh

* *Cannacorus ampliffimo folio, flore rutilo. Inſt. pag. 367.*

† *Lilio-aſphodelus puniceus. Cluſ. Hiſt. 1. pag. 137.*

‡ *Lupinus albus. Park. Morif. Hiſt. ſect. 2. tab. 7. fig. 3.*

1753.
October.

is not very common, and they have none but from the sea. At that time they were fishing for small soles and flounders, which they caught easily with a rod. I observed a certain conformity between this island and that of Tenerif, as it has very little game, and few birds. In several of my walks, for two leagues all round, I met with only a few hares, and some quail scattered about the fields. True it is, that there were blackbirds on the tops of the mountains; and I saw a great number of them myself, whose black plumage was agreeably speckled with white: they perched in companies on strawberry-trees, eating the fruit, and chattering all the time.

Though autumn is a very agreeable season in the Azores or Western Isles, yet the skies began to be over-cast and to threaten rain. The island of Fayal is more rainy than the rest; doubtless, because of the isle of Pico, and its own mountains, which determine the clouds to stop there. Hence
arise

Springwaters

1753.
October.

arise a great number of springs, which appear every where, even in several parts of the town, where they are collected in well-paved cisterns. The water of these springs, though very pure, is heavy and extremely crude; to me it appeared to have a tincture of mineral, and of the ferruginous kind.

The island
of Fayal is
the effect of
volcano's.

The highest mountain in this island is very near its center, within two leagues and an half from the town. Heretofore it vomited fire with combustible matter, and caused frequent earthquakes. The eruption in 1672 was the last: it left at the mouth of the volcano a large bason, which, according to the testimony of the inhabitants, has the figure of a parellelogram, surrounded with a very high wall, and so regular, that one would take it to be done by art, if we did not know for certain, that it owes its origin to subterraneous fires. The rainwaters have now filled this bason, and formed it into a kind of lake, or, to express

press

1752.
October.

press myself more properly, a reservoir of fine water, greatly admired by the inhabitants. There can be no doubt, but that the whole surface of the island has been raised by means of this or several volcanos together; for it has no other stone than different kinds of lavas, mixed with burnt stones and pumices. The grain of those lavas is much thicker than that of the stones of the island of Tenerif, of which I have made mention in the beginning of this narrative.*

This relaxation, though somewhat long, gave me a great deal of pleasure. Besides the knowledge I thereby acquired of a country, which I had never seen before, I refreshed myself after the fatigues of my voyage, and was better prepared for that to France. The usual slowness of the Portuguese, and the difficulty we had from the roughness of the sea, in laying in

* See page 20.

a fresh

1753.
November.

8 Novem.
they hoist
fail.

a fresh store of water, wood, biscuit, flour, beef, fowls, and other provisions, hindered us from leaving the port of Fayal till the 8th of November. The wind was at south-west, so that we soon lost sight of the Azores. I embraced the opportunity of the calmness of the weather, to fill a second bottle of water within three hundred leagues of the coast of France: and this was all I wanted, in order to make a comparison between it, and the bottle I had filled in the sea of Senegal.

Stormy
weather for
two months.

Our voyage from Senegal to Fayal had been very tedious; but that from Fayal to France proved most dangerous. We had scarcely advanced fifty leagues from the Azores, when a boisterous south-east wind spread itself over the deep, and assailed us with a storm which lasted two months. We were obliged to furl our sails; and in this condition we tumbled and tossed about, at the mercy of the waves. Imagine to yourself the situation
of

1753.
December.

of a crazy vessel, exposed to a tempestuous ocean, now rising a-top a watery mountain, and now sinking into an abyss; battered in flank by one wave, overborne by another, which in falling seems as if it would dash it into a thousand pieces. Imagine at the same time the uneasy condition of a voyager, who seeks for repose, which he can no where find; the perplexity of a pilot, whose art is baffled, and who in vain looks up to the heavens to find out his course, while thick clouds and foaming billows seem to conspire against him: imagine, in short, the confusion even of the most experienced mariner, who sees a ship disappear on one side of him; how forlorn, how comfortless the scene!

Such was our situation during the two shortest months in the year; and in such distress were we tossed to and fro, both in the Ocean and the Channel, whither we were forced by the currents, and where we were every day obliged to avoid the very land we sought for lest
we

They mistake their course in the Channel.

1754.
January.

we should split on the rocks, which abounded on that coast: when a calm ensuing, we took advantage of it to get out of the Channel, and to seek for shelter in Brest. For the violence of the storm had torn our sails to pieces, broke all our tackling, and damaged the body of the vessel; and as provisions were also short, we could not in this condition reach l'Orient, our destined harbour, even if we had had the most favourable gales.

4 January,
he puts into
the harbour
of Brest.

As soon as we came to the isle of Ushant, we took a coasting pilot on board, who brought us into the harbour of Brest, the 4th of January, 1754. The reader may judge of the state I was in, upon my arrival at this port, after a very hard voyage of four months, which I had undertaken just as I was recovering from a dangerous sickness, the remembrance whereof was still more afflicting to me, when I perceived that most of the plants which occasioned it, were destroyed by the severity of the season. While our vessel was refitting

refitting, in order to proceed on her voyage to port l'Orient, I passed a month at Brest for the recovery of my health, and to prepare myself for my journey to Paris: this I performed in the midst of the frost and snows of the month of February, which, as every body knows, were extremely piercing, especially in Brittany. The rest of my plants were killed by the cold: however they did me a piece of service in convincing me, that even the saltest water, such as that of Senegal, is capable of being frozen. The two bottles I brought from thence, well covered with hay, were broke by the ice congealed within them, which tasted quite fresh, as Mr. de Jussieu and I observed, upon my arrival at Paris the 18th of February, after upwards of five years absence.

1754.
January.

Sea-water
capable of
being
frozen.

18 Feb. he
arrives at
Paris.

F I N I S.

Z

We beg the favour of the Reader to excuse a few
literal mistakes, and to make the following cor-
rections.

E R R A T A.

- P. 84. l. 16. for *potoes* read *potatoes*.
P. 86. l. 3. from the bottom, for *high trot* r.
moderate gallop.
P. 92. l. 15. before *we* r. *which*.
P. 100. l. 15. for *situations* r. *sinuations*.
P. 143. l. 5. after *life* insert *before* nor *since*.
P. 150. l. 8. after *thick* put a comma, and dele comma
after *bees*.
P. 181. l. 2. for *soft* r. *fresh*.
P. 202. l. 9. dele *of is*.
P. 223. l. 17. dele *which*.
P. 300. l. 7. for *botates* r. *batates*.
P. 311. l. 2. for *sbrubs* r. *a shrub*.
P. 321. l. 9. before *at* insert *time*.
P. 331. l. 10. from the bottom, for *companies* r. *flocks*.

